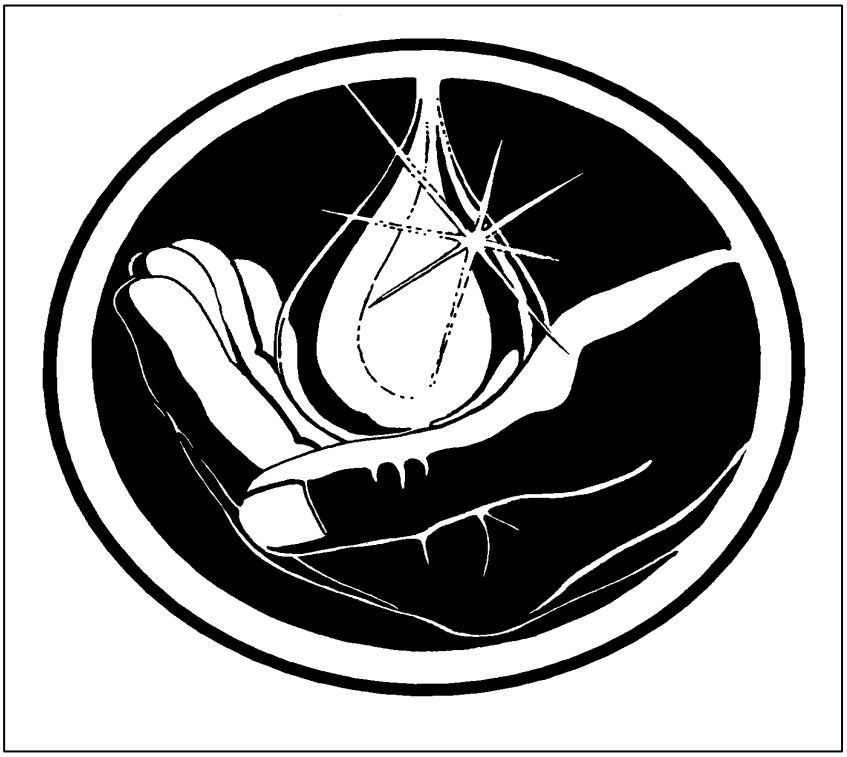
CIRCULAR DEQ-7

MONTANA
NUMERIC WATER QUALITY STANDARDS



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CIRCULAR DEQ-7

August 2010

Introduction

This document contains numeric water quality standards for Montana's surface and ground waters. The standards were developed in compliance with Section 75-5-301, MCA of the Montana Water Quality Act and Section 303(c) of the Federal Clean Water Act (CWA). Together, these provisions of state and federal law require the adoption of narrative and numeric standards that will protect the designated beneficial uses of state waters, such as growth and propagation of fishes and associated wildlife, waterfowl and furbearers, drinking water, culinary and food processing, recreation, or agriculture.

CIRCULAR DEQ-7 contains a great deal of information about Montana's numeric standards in a compact form. In addition to providing the numeric water quality standards for each parameter, the Circular also contains the following:

- The primary synonyms of each parameter. This section also includes any identification numbers used by the U.S. Environmental Protection Agency (EPA) and the RCRA waste number (if it exists) as the last entry in the synonyms section;
- the Chemical Abstracts Service Registry Number (CASRN) number for each chemical, as well as the National Institute of Occupational Safety and Health (NIOSH) and the SAX reference numbers (taken from *Dangerous properties of Industrial Materials*, by Irving Sax); the categorization of each parameter according to the type of pollutant;
- the bioconcentration factor, if known;
- trigger values used to determine nonsignificant changes in water quality" under Montana's nondegradation policy (ARM 17.30.701-718); and
- required reporting values (RRV). See footnote 19 for a further explanation of RRV usage.

In addition, the Circular contains ground water criteria for pesticides, developed in compliance with the Montana Agricultural Chemical Ground Water Protection Act (80-15-201, MCA).

The numeric water quality standards in this Circular have been established for parameters (i.e., "pollutants") in five categories: toxic, carcinogenic, radioactive, nutrient, or harmful. You will find an explanation of each of these categories given below.

The Department will provide hard copies of this document upon request or the document may be retrieved from the Department WEB site at, http://www.deq.mt.gov/wqinfo/Circulars/DEQ-7.PDF. Use of an electronic copy will enable the reader to search for synonyms or CASRN numbers. Such searches will make this document easier to use.

Parameters are listed in alphabetical order. In order to facilitate listing by alphabetical order, parameters that are normally written with the numbers first are listed with the numbers last. For example, 2,4-Dinitrophenol is listed as Dinitrophenol, 2,4-.

There are many explanatory notes following the table portion of CIRCULAR DEQ-7. Footnotes referencing the explanatory notes are found in both the table headings and in individual line items. The notes following the table explain various aspects of the standards. For example, the standards for some metals, ammonia, dissolved oxygen, and phenol, cover a range of values that are computed by using tables or formulas, with such parameters as pH, hardness or temperature.

Standards Development

Montana's numeric water quality standards were developed using guidance from the EPA which includes:

- National Recommended Water Quality Criteria (NRWQC) [1] developed under Section 304(a) of the CWA; and
- Drinking Water Lifetime Health Advisory (HA) and Maximum Contaminant Levels (MCL) developed under the Safe Drinking Water Act.[2]

EPA's guidance includes the NRWQC for priority pollutants (PP), non-priority pollutants (NPP) and organoleptic pollutants (OL), developed under Section 304 of the CWA, health advisories (HA), and drinking water standards referred to as Maximum Contaminant Levels (MCL). Publications containing EPA guidance include: 1986 Quality Criteria for Water, EPA 440/5/86-001 (the "Gold Book") and numerous updates; Toxics Criteria for those States not Complying with Clean Water Act 303(c)(2)(B); (The

[1] See http://www.epa.gov/waterscience/criteria/wqctable/.
[2] See http://www.epa.gov/waterscience/criteria/drinking/.

National Toxics Rule [NTR]) which was published in the Code of Federal Regulations, 40 CFR 131.36 (1992); Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; (62 F.R. 42159 [1997]); National Recommended Water Quality Criteria :2002 (EPA 822-R-02-047); and 2004 Edition of the Drinking Water Standards and Health Advisories (EPA 822-R-04-005). The most recent EPA NRWQC and 2009 Edition of the Drinking Water Standards and Health Advisories guidance was used to develop the standards in this Circular.

The NRWQC published by EPA include criteria recommendations for the protection of aquatic life and human health.

Aquatic life criteria take into consideration the magnitude (how much of a pollutant is allowable), duration of exposure to the pollutant (averaging period), and frequency (how often criteria can be exceeded). Acute criteria are based on a one hour exposure event and can only be exceeded once, on average, in a three year period. Chronic criteria are based on a 96 hour exposure and can only be exceeded, on average, once on a three year period. For more information, see EPA's ***Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses.***[3] The techniques used for determining Aquatic Life numeric standards are complex and take a great deal of time to develop. They require a consensus of information within the scientific community that may take 10+ years to develop. Aquatic Life Standards are added to DEQ-7 as they become available.

Human health criteria also have a magnitude, duration and frequency component. The standard assumption in calculating the magnitude of the pollutant for groundwater exposure is that a 70 kg person will consume 2 liters a day, for 70 years. Water consumption is assumed to be the only route of exposure in that time frame. For surface water criteria, two routes of exposure are considered, water consumption and fish consumption (EPA and DEQ-7 uses a fish consumption rate of 17.5 grams of fish per day).

[3] Available at http://www.epa.gov/waterscience/criteria/library/85guidelines.pdf.

EXPLANATION OF TERMS

Toxics: A toxin is any chemical which has an immediate, deleterious effect on the metabolism of a living organism. The surface water quality standards for human health toxins are the more restrictive of either the MCL or the NRWQC. The ground water standards for human health toxins are based on the drinking water MCL or, if a MCL is not available, the NRWQC criteria.

Carcinogens: The Montana Water Quality Act requires that human health standards for carcinogens be the more restrictive of either of the following: (1) the risk-based level of one in one hundred thousand [1x10-5] for all carcinogens except arsenic, which is based upon one in one thousand [1x10-3]; or, (2) the MCL. For surface water the risk-based levels given in EPA's NRWQC criteria were used or, if not available, health advisory (HA) information was used. In cases where a risk based level was not available, the most recent RfD or cancer potency factor (q1*) in IRIS was used to compute the standard. In cases where no risk-based levels were available for known carcinogens, the standards in this Circular are based on toxic effects. Ground water standards are based on EPA Drinking Water Health Advisories, NRWQC or IRIS information.

Bioconcentrating: Bioconcentration factors are not a separate category in DEQ-7, but are included in either the toxic or carcinogenic category. The human health standards for carcinogens and other parameters that exhibit bio-concentration properties were developed using the assumption that there are two routes of exposure: through consumption of water and fish. EPA’s water quality criteria are derived using an average fish consumption rate of 17.5 grams/day. Montana has not conducted its own fish consumption survey. The standards in this Circular use EPA's recommended average daily fish consumption value.

Pesticides: The Montana Agricultural Chemical Ground Water Protection Act requires that MCLs be adopted as ground water standards for pesticides if MCLs are available. Pesticides are not a separate category in DEQ-7, but are included in either the toxic or carcinogenic categories, and the criteria derivation would follow the process described above for those categories. If no MCLs or other federal criteria are available, standards must be developed using available data on health effects reference dose, [RfD]) and standard assumptions. The standard assumptions are: 2 liters of water

are consumed per day and adults weighing seventy kilograms are exposed for 70 years (life long exposure) to a single source of water. When information was available, a relative source contribution (RSC) factor was also applied. The RSC is the percentage of a parameter's intake through drinking water versus other dietary sources. A RSC of 0.2 was used in most cases to develop ground water standards for pesticides. In some cases, no data was available to develop a water quality standard for a pesticide in surface water. In these cases, the ground water standard (developed for a pesticide according to the risk-base analysis provided above) was also adopted as a surface water standard Other federal data sources were used when the EPA's most recent drinking water regulations and health advisories did not include data for a pesticide.

Radioactive: All elements that emit alpha, beta or gamma radiation are regulated in ground water by the EPA. As all forms of radiation are carcinogenic, the calculation of a numeric standard is derived either from MCL's set by the EPA or calculated from the Oral Cancer Slope Factor (OCSF) provided by the EPA Regional toxicologist, the use of a risk based level of 1 in one hundred thousand ($1x10^{-5}$) and the consumption of 2 liters of water daily for a 70 kilo man. Unlike pesticides, a relative source correction (RSC) is not applied to the calculation of numeric standards for radioactive substances.

Harmful: Pollutants typically classified as harmful include substances or measures which are controlled by both numeric and narrative standards. Examples of numeric standards would be pH, color or bacterial concentration. The numeric standards will vary dependent on the water bodies classification for beneficial use. The use of tables from the footnotes section of this Circular is pivotal to the proper selection of the appropriate standard. Narrative standards are not covered in DEQ-7, but include such parameters as alkalinity, sulfates, chloride, hardness, sediment, total dissolved solids and nutrients (for surface waters).

Nutrient: A nutrient in the aquatic environment is an essential substance (organic or inorganic) which is utilized by living organisms (such as algae or bacteria) for cellular metabolism or construction. Examples include nitrogen (typically as ammonia, nitrate or nitrite) and phosphorus. If present in excessive amounts (which depends on the ecosystem involved), nutrients can produce excessive algal and plant, which can lead to undesirable deterioration of beneficial uses of State waters.

Rules Containing Montana's Water Quality Standards

The Administrative Rules of Montana (ARM), 17.30.620 through 17.30.670, contain numeric surface water quality standards that vary with each stream classification. Examples of numeric standards that change under each stream classification include Escherichia coli bacteria, color, turbidity, pH, and temperature.

Both Montana's surface water and ground water rules contain narrative standards (ARM 17.30.620 through 17.30.670 and ARM 17.30.1001 through 17.30.1045). The narrative standards cover a number of parameters, such as alkalinity, chloride, hardness, sediment, sulfate, total dissolved solids and nutrients (for surface water), for which sufficient information does not yet exist to develop specific numeric standards. These narrative standards are directly translated to protect beneficial uses from adverse effects, supplementing the existing numeric standards.

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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number, SAX Number (25) (26) (27)	Category (1) (2)	Aquatic Life Standards		Bio-concentration Factor (BCF) (5)	Human Health Standards (17) (16)		Trigger Value (22)	Required Reporting Value (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Acenaphthene §§--- § 3Acenaphthalene § Naphthyleneethylene § 1,8-Ethylenenaphthalene § 1,8-Ethylene Naphthalene § 1,2-Dihydroacenphthylene § Acenphthylene, 1,2-Dihydro-	83-32-9 AB 1255500 AAE750	Toxic	---	---	242	670 PP	670 PP	N/A	10
Acetochlor (excludes metabolites Acetochlor ESA and Acetochlor OA) (30) §§--- § Acenit § Azetochlor § C10925 § Erunit § Harness § MG 02 § MON 097 § Nevirex	34256-82-1	Toxic	---	---	---	140 HA	140 HA	---	---
Acifluorfen §§ Blazer § Tackle § Scepter § as sodium salt	62476-59-9	Carcinogen	---	---	---	10 HA	10 HA	N/A	---
Acrolein §§ Aqualine § Biocide § Crolean § Aqualin § Propenal § SHA 00701 § 2-propenal § Acraldehyde § Acrylaldehyde § Acrylic Aldehyde § Ethylene Aldehyde	107-02-8 AS 1050000 ADR000	Carcinogen	3	---	215	60 PP	60 PP	0.7	20
Acrylamide §§ 2-Propenamide § Propenamide§ Acrylic Amide § Ethylenecarboxamide § RCRA Waste Number U007	79-06-1 AS 3325000 ADS250	Carcinogen	---	---	---	0.08 HA	0.08 HA	---	---
Acrylonitrile §§ Fumigrain § Ventox § ENT 54 § TL 314 § Carbacryl § Cyanoethylene § Vinyl cyanide § Propenenitrile § 2-Propenenitrile § Acrylonitrile monomer § RCRA Waste Number U009	107-13-1 AT 5250000 ADX500	Carcinogen	---	---	30	0.51 PP	0.51 PP	N/A	20
Alachlor (includes metabolites Alachlor ESA and Alachlor OA) (31) §§ Lasso § Lazo § Alator § Alanex § Alochlor § Pillarzo § Metachlor § Chimiclor § SHA 090501 § Methachlor § 2-Chloro-N-(2,6-Diethyl)Phenyl-N-Methoxymethylacetamide § 2-Chloro-2',6'-Diethyl-N-(Methoxymethyl)Acetanilide	15972-60-8 AE 1225000 CFX000	Carcinogen	---	---	---	2 MCL	2 MCL	N/A	0.4

CIRCULAR DEQ-7, MONTANA NUMERIC WATER QUALITY STANDARDS(9)									
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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number, SAX Number (25) (26) (27)	Category (1) (2)	Aquatic Life Standards		Bio-concentration Factor (BCF) (5)	Human Health Standards (17) (16)		Trigger Value (22)	Required Reporting Value (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Aldicarb §§ Temik § Temic § Ambush § OMS 771 § Temik G 10 § Aldecarb § Carbamyl § SHA 098301 § Carbanolate § Sulfone Aldoxycarb § Union Carbide 21149 § § Propanal, 2-Methyl-2-(Methylthio)-, O-[(Methylamino)Carbonyl]Oxime RCRA Waste Number P070	116-06-3 UE 2275000 CBM500	Toxic	---	---	---	3 MCL	3 MCL	1	1
Aldicarb Sulfone §§ Aldoxycarb § Standak § UC 21865 § Sulfocarb § SHA 110801 § Propionaldehyde, 2-Methyl-2-(Methylsulfonyl)-, O-(Methylcarbomoyl)Oxime § 2-Methyl-2-(Methylsulfonyl)Propanal O-[(Methylamino)Carbonyl]Oxime	1646-88-4 UE 2080000 AFK000	Toxic	---	---	---	3 MCL	3 MCL	2	1
Aldicarb Sulfoxide §§ ---	1646-87-3	Toxic	---	---	---	4 MCL	4 MCL	2	1
Aldrin §§ --- § HHDN § Altox § Drinox § Aldrex § Aldrite § Seedrin § Octalene § SHA 045101 § Hexachlorohexahydro-endo-exo-Dimethanonaphthalene § 1,2,3,4,10,10-Hexachloro-1,4,4a,5,8, 8a-Hexahydro-1,4,5,8-Dimethanonaphthalene § 1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-Hexahydro-endo,exo- § 1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-Hexa-Hydro-1,4:5,8-Endo,Exo-Dimethanonaphthalene § 1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-Hexahydro-1,4-endo-exo-5,8-Dimethanonaphthalene § RCRA Waste Number P004	309-00-2 IO 2100000 AFK250	Carcinogen	1.5 PP	---	4,670	0.00049 PP	0.02 HA	N/A	0.2
Alpha Emitters (11) §§ --- § Gross Alpha § Adjusted Gross Alpha	Multiple	Carcinogen / Radioactive	---	---	---	1.5 pico-curies/liter HA	1.5 pico-curies/liter HA	N/A	---
alpha-Chlordane §§ -Chlordane § cis-Chlordan § cis-Chlordane § c (cis)-Chlordane § Chlordane, cis-Isomer	5103-71-9 PB 9705000 CDR675	Carcinogen	---	---	14,100	0.0080 PP	1 HA	N/A	0.4

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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	**CASRN numbers, NIOSH number, SAX Number (25) (26) (27)**	**Category (1) (2)**	**Aquatic Life Standards**		**Bio-concentration Factor (BCF) (5)**	**Human Health Standards (17) (16)**		**Trigger Value (22)**	**Required Reporting Value (19)**
			Acute (3)	**Chronic (4)**		**Surface Water**	**Ground Water**		
alpha-Hexachlorocyclohexane **§§ ---** **§ Benzene Hexachloride-§-isomer § a-BHC § alpha-BHC § HCH-alpha § alpha-HCH § alpha-Lindane § a Hexachlorocyclohexane § alpha-Benzenehexachloride § Hexachlorocyclohexane-alpha § alpha-Hexachlorocyclohexane § Benzene Hexachloride-alpha-isomer § alpha-1,2,3,4,5,6-Hexachlorocyclohexane § Cyclohexane, alpha-1,2,3,4,5,6-Hexachloro- § 1-alpha,2-alpha,3-beta,4-alpha,5-beta,6-beta-Hexachlorocyclohexane § Cyclohexane, alpha-1,2,3,4,5,6-Hexachloro-, (1-alpha, 2-alpha, 3-beta, 4-alpha, 5-beta, 6-beta)-**	**319-84-6** **GV 3500000** **BBQ000**	**Carcinogen**	**---**	**---**	**130**	**0.026** **PP**	**0.026** **PP**	**N/A**	**0.1**
Aluminum, dissolved, pH 6.5 to 9.0 only (9) **§§ Al**	**7429-90-5** **BD 0330000** **AGX000**	**Toxic**	**750** **NPP**	**87** **NPP**	**---**	**---**	**---**	**30**	**30**
Ametryn **§§ Ametrex**	**834-12-8**	**Toxic**	**---**	**---**	**---**	**60** **HA**	**60** **HA**	**---**	**---**
Aminomethylphosphonic Acid (AMPA) Glyphosate metabolite **§§ ---**		**Toxic**	**---**	**---**	**---**	**2,000** **HA**	**2,000** **HA**		
Aminopyralid **§ 4-amino-3,6-dichloropyridine-2carboxilic acid, § 4 amino-3,6 dichlro-2-pyridinecarboxilic acid § Milestone**	**150114-71-9**	**Toxic**				**4,000** **HA**	**4,000** **HA**		
Ammonia [total ammonia nitrogen (NH3-N plus NH4-N)] as mg/l N **§§ ---** **§ Ammonia Anhydrous § Anhydrous Ammonia § Spirit of Hartshorn**	**7664-41-7** **BO 0875000** **AMY500**	**Toxic**	**(7)(8)** **NPP**	**(7)(8)** **NPP**	**---**	**---**	**---**	**10**	**50**
Ammonium Sulfamate **§§ ---**	**7773-06-0**	**Toxic**	**---**	**---**	**---**	**2,000** **HA**	**2,000** **HA**	**---**	**---**
Anthracene (PAH) **§§ Paranaphthalene** **§ Green Oil § Anthracin § Tetra Olive N2G**	**120-12-7** **CA 9350000** **APG500**	**Toxic**	**---**	**---**	**30**	**8,300** **PP**	**2,100** **HA**	**0.04**	**0.2**
Antimony **§§ Sb** **§ Antimony Black § Antimony Regulus § C.I. 77050 § Stibium**	**7440-36-0** **CC 4025000** **AQB750**	**Toxic**	**---**	**---**	**1**	**5.6** **PP**	**6** **MCL**	**0.4**	**3**

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Arsenic (36) **§§ As** **§ Arsenicals § Arsenic-75 § Arsenic Black § Colloidal Arsenic § Grey Arsenic § Metallic Arsenic**	**7440-38-2** **CG 0525000** **ARA750**	**Carcinogen**	**340** **PP**	**150** **PP**	**44**	**10** **MCL**	**10** **MCL**	**N/A**	**3**
Asbestos, fibers longer than 10 microns in length **§§ ---** **§ Amianthus § Amosite (Obs.) § Amphibole § Asbestos Fiber § Fibrous Grunerite § NCI CO8991 § Serpentine, includes Chrysotile, Actinolite, Aurosite, Anthophyllite, Crocidolite, and Tremolite**	**Multiple**	**Carcinogen**	**---**	**---**	**---**	**7.E+06 fibers/liter** **MCL**	**7.E+06 fibers/liter** **MCL**	**N/A**	**---**
Atrazine (includes metabolites deethyl atrazine, deisopropyl atrazine, and deethyl deisopropyl atrazine) (32) **§§ ---** **§ Aatrex § Aktikon § Atrasine § Atred § Candex § Crisatrina § Crisazine§ Cyazin § Fenamin § Fenamine § Zeaphos § Fenatrol § Gesaprim § Hungazin § Inakor § Primatol § Malermais § Radazin § Radizine § Shell Atrazine herbicide § Strazine § Zeazine § SHA 080803 § 1-Chloro-3-Ethylamino-5-Isopropylamino-2,4,6-Triazine § s-Triazine, 2-Chloro-4-Ethylamino-6-Isopropylamino- § 2-Chloro-4-Ethylamino-6-Isopropylamino-s-Triazine § 6-Chloro-N-Ethyl-N'-(1-Methylethyl)-1,3,5-Triazine-2, 4-Diamine**	**1912-24-9** **XY 5600000** **PMC325**	**Carcinogen**	**---**	**---**	**---**	**3** **MCL**	**3** **MCL**	**0.1**	**0.6**
Azinophos and degredate azinphos methyl oxon **metiltriazotion § Azimil § Bay 9027 § Bay 17147 § Carfene § Cotnion-methyl § Gusathion § Gusathion-M§ Guthion § Methyl-Guthion**	**961-22-8**	**Toxic**				**10** **HA**	**10** **HA**		
Azoxystrobin **§§ ---** **§ azoksystrobin § Azoxistrobin § Azoxistrobina § Azoxystrobin (BSI, ISO) § azoxystrobine § Azoxystrolin**	**131860-33-8**	**Toxic**	**---**	**---**	**---**	**1,000** **HA**	**1,000** **HA**	**---**	**---**
Barium **§§ Ba**	**7440-39-3** **CA 8370000** **BAH250**	**Toxic**	**---**	**---**	**---**	**1000** **NPP**	**1000** **NPP**	**2**	**5**
Bentazon Methyl **§§ ---** **§ Basagran**	**50723-80-3** **25057-89-0**	**Toxic**	**---**	**---**	**---**	**200** **HA**	**200** **HA**	**---**	**---**

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Benzene §§ --- § Phene § Benzol § Benzolene § Pyrobenzol § Carbon Oil § SHA 109301 § Coal Naphtha § Motor Benzol § Phenyl hydride § Cyclohexatriene C § Caswell Number 077 § EPA Pesticide Chemical Code 008801 § NCI C55276 § RCRA Waste Number U019	71-43-2 CY 1400000 BBL250	Carcinogen	---	---	5.2	5 MCL	5 MCL	N/A	0.5
Benzidine §§ --- § p,p'-Bianiline § 4,4'-Bianiline § 4,4'-Biphenyldiamine § p,p'-Diaminobiphenyl § 4,4'-Diaminodiphenyl § 4,4'-Biphenylenediamine § 4,4'-Diphenylenediamine § Biphenyl, 4,4'-Diamino- § 4,4'-Diamino-1,1'-Biphenyl § (1,1'-Biphenyl)-4,4'-Diamine § NCI C03361 § RCRA Waste Number U021	92-87-5 DC 9625000 BBX000	Carcinogen	---	---	87.5	0.00086 PP	0.00086 PP	N/A	20
Benzo(g,h,i)perylene (PAH) §§ --- § 1,12-Benzoperylene § 1,12-Benzperylene § Benzo(ghi)Perylene	191-24-2 DI 6200500 BCR000	Toxic	---	---	30	---	---	0.076	10
Benzo[a]Pyrene (PAH) §§ --- § BaP § 3,4-BP § Benz(a)Pyrene § Benzo-a-Pyrene § 3,4-Benzpyrene § 6,7-Benzopyrene § 3,4-Benzopyrene § 3,4-Benz(a)Pyrene § Benzo(d,e,f)Chrysene	50-32-8 DJ 3675000 BCS750	Carcinogen	---	---	30	0.038 PP	0.05 HA	N/A	0.10
Benzo[b]Fluoranthene (PAH) §§ --- § B(b)F § Benzo(b)Fluoranthene § Benzo(e)Fluoranthene § 2,3-Benzfluoranthene § 3,4-Benzfluoranthene § 3,4-Benzofluoranthene § 2,3-Benzofluoranthene § 2,3-Benzofluoranthrene § Benz(e)Acephenanthrylene § 3,4-Benz(e)Acephenanthrylene	205-99-2 CU 1400000 BAW250	Carcinogen	---	---	30	0.038 PP	0.5 (29) HA	N/A	0.10

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			Acute (3)	**Chronic (4)**		**Surface Water**	**Ground Water**		
Benzo[k]Fluoranthene (PAH) **§§ ---** **§ Benzo(k)Fluoranthene § 8,9-Benzofluoranthene § Dibenzo(b,jk)Fluorene § 2,3,1'8'-Binaphthylene § 11,12-Benzofluoranthene § 11,12-Benzo(k)Fluoranthene**	**207-08-9** **DF 6350000** **BCJ750**	**Carcinogen**	**---**	**---**	**30**	**0.038** **PP**	**5 (29)** **HA**	**N/A**	**0.10**
Benz[a]anthracene (PAH) **§§ ---** **§ Tetraphene § Benzanthracene § Benzoanthracene § Naphthanthracene § 1,2-Benzanthrene § Benz(a)Anthracene § Benzo(a)Anthracene § 1,2-Benzanthracene § Benzo(b)Phenanthrene § 1,2-Benzoanthracene § Benzanthracene, 1,2- § 1,2-Benz(a)Anthracene § 2,3-Benzophenanthrene § RCRA Waste Number U018**	**56-55-3** **CV 9275000** **BBC250**	**Carcinogen**	**---**	**---**	**30**	**0.038** **PP**	**0.5 (29)** **HA**	**N/A**	**0.10**
Beryllium **§§ Be** **§ Beryllium-9 § Glucinum § RCRA Waste Number P015**	**7440-41-7** **DS 1750000** **BFO750**	**Carcinogen**	**---**	**---**	**19**	**4** **MCL**	**4** **MCL**	**N/A**	**1**
Beta Emitters (11) **§§ ---** **§ Gross Beta**	**Multiple**	**Carcinogen/ Radioactive**	**---**	**---**	**---**	**0.4 mrem /yr** **HA**	**0.4 mrem /yr** **HA**	**N/A**	**---**
Beta-Chloronaphthalene **§§ 2-Chloronaphthalene** **§ ß-Chloronaphthalene § Naphthalene, 2-Chloro- § 2 Chlornaftalen § A13-01537 § CCRIS 5995 § HSDB 4014 § Halowax § EINECS 202-079-9 § RCRA waste number U047**	**91-58-7** **QJ 2275000** **CJA000**	**Toxic**	**---**	**---**	**202**	**1,000** **PP**	**1,000** **PP**	**0.94**	**10**

CIRCULAR DEQ-7, MONTANA NUMERIC WATER QUALITY STANDARDS(9)									
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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number, SAX Number (25) (26) (27)	Category (1) (2)	Aquatic Life Standards		Bio-concentration Factor (BCF) (5)	Human Health Standards (17) (16)		Trigger Value (22)	Required Reporting Value (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
beta-Hexachlorocyclohexane **§§ ---** **§ ß-BHC § beta-BHC § HCH-beta § beta-HCH § ß-Lindane § beta-Lindane § beta-Hexachlorobenzene § ß Hexachlorocyclohexane § Hexachlorocyclohexane-beta § Hexachlorocyclohexane, beta- § trans-alpha-Benzenehexachloride § Cyclohexane, 1,2,3,4,5,6-Hexachloro-, beta- § 1-alpha,2-beta,3-alpha,4-beta,5-alpha,6-beta-Hexachlorocyclohexane § Cyclohexane, 1,2,3,4,5,6-Hexachloro-, (1-alpha, 2-beta, 3-alpha, 4-beta, 5-alpha, 6-beta)- § Benzenehexachloride, trans-alpha- § beta-1,2,3,4,5,6-Hexachlorocyclohexane**	**319-85-7** **GV 4375000** **BBR000**	**Carcinogen**	**---**	**---**	**130**	**0.091** **PP**	**0.091** **PP**	**N/A**	**0.1**
Bis(2-Chloroisopropyl) Ether **§§ ---** **§ DCIP § NCI C50044 § Dichlorodiisopropyl Ether § 2,2'-Oxybis(1-Chloropropane) § Bis (2-Chloroisopropyl) ether § Propane, 2,2'-Oxybis(2-Chloro- § Propane, 2,2'-Oxybis[1-Chloro- § 2',2'-Dichlorodiisopropyl Ether § Dichlorodiisopropyl Ether (DOT) § Bis(2-Chloro-1-Methylethyl) Ether § RCRA Waste Number U027** **Reregistration decision CAS-RN**	**108-60-1** **KN 1750000** **BII250** **39638-32-9**	**Toxic**	**---**	**---**	**2.47**	**1,400** **PP**	**1,400** **PP**	**0.8**	**10**
Bis(2-Chloroethoxy)Methane **§§ ---** **§ Bis(ß-Chloroethyl)Formal**	**111-91-1** **PA 3675000** **BID750**	**Toxic**	**---**	**---**	**0.64**	**---**	**---**	**0.5**	**---**

CIRCULAR DEQ-7, MONTANA NUMERIC WATER QUALITY STANDARDS(9)									
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Pollutant **Element / Chemical Compound or Condition** **§§ - Primary Synonym § - Other Names**	CASRN numbers, NIOSH number, SAX Number (25) (26) (27)	Category (1) (2)	Aquatic Life Standards		Bio-concentration Factor (BCF) (5)	Human Health Standards (17) (16)		Trigger Value (22)	Required Reporting Value (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Bis(Chloroethyl)Ether **§§ ---** **§ BCEE § DCEE § Clorex § Chlorex § Chloroethyl Ether § Dichloroethyl Ether § Dichloroethyl Oxide § Bis(Chloroethyl) Ether § Di(2-Chloroethyl) Ether § Bis (Chloroethyl) Ether § Bis(2-Chloroethyl) Ether § Bis(ß-Chloroethyl) Ether § ß,ß'-Dichloroethyl Ether § 2,2'-Dichloroethyl Ether § Bis (2-Chloroethyl) Ether § 1,1'-Oxybis(2-Chloro)Ethane § Ethane, 1,1'-Oxybis[2-Chloro- § beta,beta'-Dichloroethyl Ether § 1-Chloro-2-(beta-Chloroethoxy)Ethane § RCRA Waste Number U025**	**111-44-4** **KN 0875000** **BIC750**	**Carcinogen**	**---**	**---**	**6.9**	**0.30** **PP**	**0.30** **PP**	**N/A**	**10**
Bis(Chloromethyl)ether **§§ ---** **§ BCME § bis-CME § Chloromethyl Ether § Oxybis(Chloromethane) § Bis (Chloromethyl) Ether § sym-Dichlorodimethyl Ether § 1,1'-Dichlorodimethyl Ether § Dimethyl-1,1'-Dichloroether § Chloro(Chloromethoxy) Methane § RCRA Waste Number P016**	**542-88-1** **KN 1575000** **~~SAX:~~** **BIK000**	**Carcinogen**	**---**	**---**	**63**	**0.0010** **NPP**	**0.0010** **NPP**	**N/A**	**10**
Bromacil **§§ Hyvar** **§ ---**	**314-40-9**	**Carcinogen**	**---**	**---**	**---**	**90** **HA**	**90** **HA**	**N/A**	**0.5**
Bromodichloromethane (HM) **§§ Dichlorobromomethane** **§ BDCM § NCI C55243 § Methane, bromodichloro- § Dichloromonobromomethane § Monobromodichloromethane**	**75-27-4** **PA 5310000** **BND500**	**Carcinogen**	**---**	**---**	**3.75**	**5.5** **PP**	**10** **HA**	**N/A**	**0.5**
Bromoform (HM) **§§ Tribromomethane** **§ NCI C55130 § Methane, Tribromo- § Methenyl Tribromide § RCRA Waste Number U225**	**75-25-2** **PB 5600000** **BNL000**	**Carcinogen**	**---**	**---**	**3.75**	**43** **PP**	**80** **HA**	**N/A**	**0.5**
Bromoxynil **§§ ---**	**1689-84-9**	**Carcinogen**	**---**	**---**	**---**	**3.4** **HA**	**3.4** **HA**	**---**	**---**

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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number, SAX Number (25) (26) (27)	Category (1) (2)	Aquatic Life Standards		Bio-concentration Factor (BCF) (5)	Human Health Standards (17) (16)		Trigger Value (22)	Required Reporting Value (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Butyl Benzyl Phthalate §§ --- § BBP § Sicol 160 § Unimoll BB § Palatinol BB § Santicizer 160 § Butylbenzylphthalate § Butylbenzyl Phthalate § Benzyl Butyl Phthalate § n-Benzyl Butyl Phthalate § Benzyl n-Butyl Phthalate § Phthalic Acid, Benzyl Butyl Ester § Butyl Phenylmethyl 1,2-Benzenedicarboxylate § 1,2-Benzenedicarboxylic Acid, Butyl Phenylmethyl Ester § NCI C54375	85-68-7 TH 9990000 BEC500	Toxic with BCF >300	---	---	414	1,500 PP	1,500 PP	N/A	10
Butylate §§ Sutan § ---	2008-41-5	Carcinogen	---	---	---	400 HA	400 HA	N/A	---
Cadmium §§ Cd § C.I. 77180 § Colloidal Cadmium	7440-43-9 EU 9800000 CAD000	Toxic	0.52@25 mg/l hardness (12) PP	0.097@25 mg/l hardness (12) PP	64	5 MCL	5 MCL	0.1	0.08
Carbaryl §§ Sevin § ---	63-25-2	Toxic	---	---	---	700 HA	700 HA	2	---
Carbofuran §§ --- § Yaltox § Euradan § Furadan § Curaterr § Furacarb § SHA 090601 § Niagra 10242 § 2,2-Dimethyl-7-Coumaranyl N-Methylcarbamate § 2,2-Dimethyl-2,3-Dihydro-7-Benzofuranyl N-Methylcarbamate § Carbamic Acid, Methyl-, 2,3-Dihydro-2,2-Dimethyl-7-Benzofuranyl Ester	1563-66-2 FB 9450000 FPE000	Toxic	---	---	---	40 MCL	40 MCL	1	1
Carbon Tetrachloride §§ Freon 10 § R 10 § Univerm § Tetrasol § Fasciolin § Flukoids § Necatorina § Necatorine § Halon 104 § Tetraform § Carbon Tet § Benzinoform § Carbon Chloride § Perchloromethane § Tetrachloromethane § Methane Tetrachloroide § RCRA Waste Number U211	56-23-5 FG 4900000 CBY000	Carcinogen	---	---	18.75	2.3 PP	3 HA	N/A	0.5
Carboxin §§ Vitavax § ---	5234-68-4	Toxic	---	---	---	700 HA	700 HA	1	---
Chloramben §§ Vegiben § ---	133-90-4	Toxic	---	---	---	100 HA	100 HA	---	---

CIRCULAR DEQ-7, MONTANA NUMERIC WATER QUALITY STANDARDS(9)									
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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number, SAX Number (25) (26) (27)	Category (1) (2)	Aquatic Life Standards		Bio-concentration Factor (BCF) (5)	Human Health Standards (17) (16)		Trigger Value (22)	Required Reporting Value (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Chlordane §§ Termex § Belt § Niran § Dowchlor § Chlortox § Chlordan § Clordano § Chlor Kil § Toxichlor § Octa-Klor § Ortho-Klor § SHA 058201 § Gold Crest C-100 § Chlordane, Technical § Octachloro-4, 7-Methanohydroindane § Octachlorodihydrodicyclopentadiene § 1,2,4,5,6,7,8,8-Octachloro-3a,4,7,7a-Hexahydro § Octachloro-4,7-Methanotetrahydroindane-4,7-Methylene Indane § 4,7-Methanoindan, 1,2,4,5,6,7,8,8-Octachloro-3a,4,7,7a-tetrahydro- § 1,2,4,5,6,7,8,8-Octachloro-2,3,3a,4,7,7a-Hexahydro-4,7-Methano-Indene § 4,7-Methano-1H-Indene 1,2,4,5,6,7,8,8-Octachloro-2,3,3a,4,7,7a-Hexahydro- § RCRA Waste Number U036	57-74-9 PB 9800000 CDR750	Carcinogen	1.2 PP	0.0043 PP	14,100	0.0080 PP	1 HA	N/A	0.4
Chlorimuron Ethyl §§ Classic § ---	90982-32-4	Toxic	---	---	---	700 HA	700 HA	0.1	---
Chlorine, total residual §§ Cl § Bertholite § Chlorine, molecular § Molecular Chlorine	7782-50-5 FO 2100000 CDV750	Toxic	19 NPP	11 NPP	---	4,000 MCL	4,000 MCL	 ---	---
Chlorobenzene §§ Monochlorobenzene § MCB § Chlorobenzol § Chlorbenzene § Phenyl Chloride § Benzene Chloride § Benzene, Chloro- § Monochlorbenzene § NCI C54886 § RCRA Waste Number U037	108-90-7 CZ 0175000 BBM750	Toxic	---	---	10.3	100 MCL	100 MCL	0.5	0.5
Chlorodibromomethane §§ Monochlorodibromomethane § CDBM § NCI C55254 § Methane, Dibromochloro- § Dibromochloromethane (THM)	124-48-1 PA 6360000 CFK500	Carcinogen	---	---	3.75	4.0 PP	4.0 PP	N/A	0.5
Chloroethane §§ Ethyl Chloride § Aethylis § Aethylis Chloridum § Anodynon § Chelen § Chlorethyl § Chloridum § Chloryl § Chloryl Anesthetic § Ether Chloratus § Ether Hydrochloric § Ether Muriatic § Hydrochloric Ether § Kelene § Monochlorethane § Muriatic Ether § Narcotile § NCI C06224	75-00-3 KH 7525000 EHH000	Toxic	---	---	---	---	---	0.52	---

CIRCULAR DEQ-7, MONTANA NUMERIC WATER QUALITY STANDARDS(9)									
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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number, SAX Number (25) (26) (27)	Category (1) (2)	Aquatic Life Standards		Bio-concentration Factor (BCF) (5)	Human Health Standards (17) (16)		Trigger Value (22)	Required Reporting Value (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Chloroform (HM) §§ Trichloromethane § TCM § Freon 20 § Trichloroform § R-20 Refrigerant § Methenyl Chloride § Formyl Trichloride § Methyl Trichloride § Methane Trichloride § Methane, Trichloro- § Methenyl Trichloride § NCI CO2686§ RCRA Waste Number U044	67-66-3 FS 9100000 CHJ500	Carcinogen	---	---	3.75	57 PP	70 HA	N/A	0.5
Chlorophenol, 2- §§ Phenol, 2-Chloro § o-Chlorophenol § 2-Chlorophenol § Phenol, o-Chloro- § RCRA Waste Number U048	95-57-8 SK 2625000 CJK250	Toxic	---	---	134	81 PP	81 PP	0.3	10
Chlorophenyl Phenyl Ether, 4- §§ --- § 4- Chlorophenyl Phenyl Ether	7005-72-3	Toxic with BCF >300	---	---	1,200	---	---	---	---
Chlorsulfuron §§ Glean §§ Telar	64902-72-3	Toxic	---	---	---	1750 HA	1750 HA	---	---
Chlorothalonil §§ Bravo § ---	1897-45-6	Carcinogen	---	---	---	15 HA	15 HA	N/A	---
Chlorpyrifos §§ Dursban § Ethion § Brodan § Eradex § Lorsban § Pyrinex § NA 2783 § Piridane § DowCo 179 § SHA 059101 § Ethion, dry § Chlorothalonil § Chlorpyrifos-Ethyl § O,O-Diethyl O-3,5,6-Trichloro-2-Pyridyl Phosphorothioate § Phosphorothioic Acid, O,O-Diethyl O-(3,5,6-Trichloro-2-Pyridyl) Ester	2921-88-2 TF 6300000 DYE000	Toxic	0.083 NPP	0.041 NPP	---	20 HA	20 HA	0.25	1
Chromium, all forms §§ Cr § Chrome	7440-47-3 GB 4200000 CMI750	Toxic	---	---	---	100 MCL	100 MCL	1	1
Chromium, hexavalent §§ Chromium (VI) § ---	18540-29-9	Toxic	16 PP	11 PP	16	---	---	---	5
Chromium, trivalent §§ Chromium (III) § ---	16065-83-1	Toxic	579@25mg/l hardness(12) PP	27.7 @ 25 mg/l hardness (12) PP	16	---	---	1	---

CIRCULAR DEQ-7, MONTANA NUMERIC WATER QUALITY STANDARDS(9)									
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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	**CASRN numbers, NIOSH number, SAX Number (25) (26) (27)**	**Category (1) (2)**	**Aquatic Life Standards**		**Bio-concentration Factor (BCF) (5)**	**Human Health Standards (17) (16)**		**Trigger Value (22)**	**Required Reporting Value (19)**
			Acute (3)	**Chronic (4)**		**Surface Water**	**Ground Water**		
Chrysene (PAH) **§§ ---** **§ Benz(a)Phenanthrene § Benzo(a)Phenanthrene § 1,2-Benzphenanthrene § 1,2-Benzophenanthrene § 1,2,5,6-Dibenzonaphthalene § RCRA Waste Number U050**	**218-01-9** **GC0700000** **CML810**	**Carcinogen**	**---**	**---**	**30**	**0.038** **PP**	**50 (29)** **HA**	**N/A**	**0.10**
cis-1,2-Dichloroethylene **§§ ---** **§ 1,2-Dichloroethylene § cis-Dichloroethylene § cis-1,2-Dichloroethene § 1,2,cis-Dichloroethylene § ethylene, 1,2-Dichloro-, (z)-**	**156-59-2** **KV 9420000** **DFI200**	**Toxic**	**---**	**---**	**---**	**70** **MCL**	**70** **MCL**	**0.002**	**0.5**
cis-1,3-Dichloropropene **§§ Telone II** **§ 1,3-Dichloropropene § 1,3-Dichloropropylene § (Z)-1,3-Dichloropropene § cis-1,3-Dichloropropylene § 1-Propene, 1,3-Dichloro-, (Z)-**	**10061-01-5** **UC 8325000** **DGH200**	**Carcinogen**	**---**	**---**	**1.91**	**3.4** **PP**	**4** **HA**	**N/A**	**0.5**
Clopyralid **§§ Stinger** **§ ---**	**1702-17-6**	**Toxic**	**---**	**---**	**---**	**3,500** **I**	**3,500** **I**	**1**	**---**
Color **§§ ---**	**N/A**	**Harmful**	**---**	**---**	**---**	**(18)**	**(18)**	**---**	**5 UNITS**
Copper **§§ Cu** **§ Allbri Natural Copper § ANAC 110 § Arwood Copper § Bronze Powder § CDA 101 § CDA 102 § CDA 110 § CDA 122 § C.I. 77400 § C.I. Pigment Metal 2 § Copper Bronze § 1721 Gold § Gold Bronze § Kafar Copper § M1 (Copper) § M2 (Copper) § OFHC Cu § Raney Copper**	**7440-50-8** **GL 5325000** **CNI000**	**Toxic**	**3.79@25mg/l hardness (12)** **PP**	**2.85@25 mg/l hard ness (12)** PP	**36**	**1,300** **PP**	**1,300** **PP**	**0.5**	**1**
Cyanazine **§§ Bladex** **§ ---**	**21725-46-2**	**Toxic**	**---**	**---**	**---**	**1.0** **HA**	**1.0** **HA**	**N/A**	**---**
Cyanide, total **§§ ---** **§ Cyanide § Isocyanide § Cyanides, includes soluble salts and complexes § RCRA Waste Number P030**	**57-12-5** **GS 7175000** **COI500**	**Toxic**	**22** **PP**	**5.2** **PP**	**1**	**140** **PP**	**200** **MCL**	**---**	**5**

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Dacthal **§§ DCPA** **§ ---**	**1861-32-1**	**Toxic**	**---**	**---**	**---**	**70** **HA**	**70** **HA**	**0.025**	**---**
Dalapon **§§ Revenge** **§ Dalpon § Unipon § Dowpon § Radapon § Basinex § Ded-Weed § Dalacide § Gramevin § Crisapon § Dalpon Sodium § 2,2-Dichloropropionic Acid § SHA 28902, for sodium salt § SHA 28901, for dalapon only Propionic Acid, 2,2-Dichloro- § Sodium 2,2-Dichloropropionate § a-Dichloropropionic Acid § a,a-Dichloropropionic Acid § alpha-alpha-Dichloropropionic Acid**	**75-99-0** **UF 0690000** **DGI400**	**Toxic**	**---**	**---**	**---**	**200** **MCL**	**200** **MCL**	**1.3**	**3**
Dalapon, sodium salt **§§ Dalpon** **§ Unipon § Dowpon § Radapon § Revenge § Basinex § Ded-Weed § Dalacide § Gramevin § Crisapon § Dalpon Sodium § Sodium Dalapon § 2,2-Dichloropropionic Acid § SHA 28902, for sodium salt § SHA 28901, for dalapon only § Propionic Acid, 2,2-Dichloro- § Sodium 2,2-Dichloropropionate § alpha-alpha-Dichloropropionic Acid**	**127-20-8** **UF 1225000** **DGI600**	**Toxic**	**---**	**---**	**---**	**200** **MCL**	**200** **MCL**	**1.3**	**3**
delta-Hexachlorocyclohexane **§§ ---** **§ -BHC § delta-BHC § HCH-delta § delta-HCH § -BHC § -Lindane § delta-Lindane § Hexachlorocyclohexane § delta-Benzenehexachloride § Hexachlorocyclohexane-delta § Hexachlorocyclohexane, delta- § Cyclohexane, delta-1,2,3,4,5,6-Hexachloro- § delta-1,2,3,4,5,6-Hexachlorocyclohexane § 1-alpha,2-alpha,3-alpha, 4-beta,5-alpha,6-beta-Hexachlorocyclohexane § Cyclohexane, delta-1,2,3,4,5,6-Hexachloro-, (1-alpha, 2-alpha, 3-alpha, 4-beta, 5-alpha, 6-beta)-**	**319-86-8** **GV 4550000** **BFW500**	**Carcinogen**	**---**	**---**	**130**	**0.2** **PP**	**0.2** **PP**	**N/A**	**0.1**

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Demeton **§§ Systox** **§ Bay 10756 § Bayer 8169 § Demox § Diethoxy Thiophosphoric Acid Ester of 2-Ethylmercaptoethanol § O,O-Diethyl 2-Ethylmercaptoethyl Thiophosphate § O,O-Diethyl O(and S)-2-(Ethyl-Thio)Ethyl Phosphorothioate Mixture § E 1059 § ENT 17,295 § Mercaptophos § Systemox § Systox § ULV § Demeton-O + Demeton-S**	**8065-48-3** **TF 3150000** **DAO600**	**Toxic**	**---**	**0.1** **NPP**	**---**	**1.4** **HA**	**1.4** **HA**	**0.25**	**---**
Di(2-Ethylhexyl)Phthalate (PAE) **§§ Bis(2-Ethylhexyl)Phthalate** **§ BEHP § DEHP § Octoil § Fleximel § Flexol DOP § Kodaflex DOP§ Ethylhexyl Phthalate § Diethylhexyl Phthalate § 2-Ethylhexyl Phthalate § Di(Ethylhexyl)phthalate § Di(2-Ethylhexyl)phthalate § Bis (2-Ethylhexyl) Phthalate § Bis(2-Ethylhexyl)-1,2-Benzene-Dicarboxylate § 1,2-Benzenedicarboxylic Acid, Bis(2-Ethylhexyl)Ester**	**117-81-7** **TI 0350000** **BJS000**	**Carcinogen**	**---**	**---**	**130**	**6** **MCL**	**6** **MCL**	**---**	**6**
Di(2-Ethylhexyl)Adipate **§§ Hexanedioic Acid** **§ DEHA § BEHA § Bisoflex DOA § Effemoll DOA § Ergoplast AdDO § Flexol A 26 § PX-238 § Reomol DOA § Vestinol OA § Wickenol 158 § Kodaflex DOA § Monoplex DOA § NCI C54386 § Octyl Adipate § Dioctyl Adipate § Di-2-Ethylhexyl Adipate § Di (2-Ethylhexyl) Adipate § Bis(2-Ethylhexyl) Adipate § Adipic Acid, Bis(2-Ethylhexyl) Ester § Hexanedioic Acid, Bis(2-Ethylhexyl) Ester**	**103-23-1** **AU 9700000** **AEO000**	**Carcinogen**	**---**	**---**	**---**	**300** **HA**	**300** **HA**	**N/A**	**6**
Diazinon **§§ ---**	**333-41-5**	**Toxic**	**0.17** **NPP**	**0.17** **NPP**	**---**	**0.6** **HA**	**0.6** **HA**	**0.25**	**---**
Dibenz[a,h]Anthracene (PAH) **§§ ---** **§ DBA § DB(a,h)A § Dibenz(a,h)Anthracene § Dibenzo(a,h)anthracene § 1,2:5,6-Benzanthracene § Dibenzo (a,h) Anthracene § 1,2,5,6-Dibenzanthracene § 1,2:5,6-Dibenz(a)Anthracene § RCRA Waste Number U063**	**53-70-3** **HN 2625000** **DCT400**	**Carcinogen**	**---**	**---**	**30**	**0.038** **PP**	**0.05 (29)** **HA**	**N/A**	**0.10**

CIRCULAR DEQ-7, MONTANA NUMERIC WATER QUALITY STANDARDS(9)									
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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	**CASRN numbers, NIOSH number, SAX Number (25) (26) (27)**	**Category (1) (2)**	**Aquatic Life Standards**		**Bio-concentration Factor (BCF) (5)**	**Human Health Standards (17) (16)**		**Trigger Value (22)**	**Required Reporting Value (19)**
			Acute (3)	**Chronic (4)**		**Surface Water**	**Ground Water**		
Dibromoethane, 1,2- **§§ Ethylene Dibromide** **§ DBE § EDB § Nephis § Kopfume § Celmide § E-D-Bee § Soilfume§ Bromofume § Dowfume 40 § SHA 042002 § Pestmaster § Soilbrom-40§ Dibromoethane § Ethylene Bromide § Glycol Dibromide § 1,2-Dibromoethane § 1,2-Ethylene Dibromide § RCRA Waste Number U067**	**106-93-4** **KH 9275000** **EIY500**	**Carcinogen**	**---**	**---**	**---**	**0.004** **HA**	**0.004** **HA**	**N/A**	**0.5**
Dibutyl Phthalate **§§ ---** **§ DPB § Celluflex DPB § Elaol § Hexaplas M/B § Palatinol C§ Polycizer DBP § PX 104 § Staflex DBP § Witcizer § SHA 028001 § Butylphthalate § N-Butylphthalate § Di-n-Butylphthalate § Di-n-Butylphthalate § Dibutyl-o-Phthalate § Di-n-Butyl Phthalate § RCRA Waste Number U069 § Phthalic Acid Dibutyl Ester § Dibutyl 1,2-Benzene Dicarboxylate § 1,2-Benzenedicarboxylic Acid Dibutyl Ester § 1,2-Benzenedicarboxylic Acid, Dibutyl Ester § Benzene-o-Dicarboxylic Acid Di-n-Butyl Ester**	**84-74-2** **TI 0875000** **DEH200**	**Toxic**	**---**	**---**	**89**	**2,000** **PP**	**2,000** **PP**	**0.25**	**10**
Dicamba **§§ Banvel** **§ ---**	**1918-00-9**	**Toxic**	**---**	**---**	**---**	**200** **HA**	**200** **HA**	**0.28**	**---**
Dichlorobenzene, 1,2- **§§ DCB** **§ ODB § ODCB § Dizene § Cloroben § Chloroben § Chloroden § Termitkil § Dilatin DB § Dowtherm E § Dilantin DB § o-Dichlorobenzene § Orthodichlorobenzene § ortho-Dichlorobenzene § Special Termite Fluid § Benzene, 1,2-Dichloro- § RCRA Waste Number U070**	**95-50-1** **CZ 4500000** **DEP600**	**Toxic**	**---**	**---**	**55.6**	**420** **PP**	**600** **MCL**	**0.02**	**10**
Dichlorobenzene, 1,3- **§§ Benzene, 1,3-Dichloro** **§ M-Dichlorobenzene § m-Dichlorobenzene § meta-Dichlorobenzene § 1,3-Dichlorobenzene-**	**541-73-1** **CZ 4499000** **DEP699**	**Toxic**	**---**	**---**	**55.6**	**320** **PP**	**600** **HA**	**0.006**	**10**

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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number, SAX Number (25) (26) (27)	Category (1) (2)	Aquatic Life Standards		Bio-concentration Factor (BCF) (5)	Human Health Standards (17) (16)		Trigger Value (22)	Required Reporting Value (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Dichlorobenzene, 1,4- §§ Benzene, 1,4-Dichloro- § 1,4- Dichlorobenzene § PDB § PDCB § NCI C54955 § Evola § Paradi § Paradow§ Persia-Perazol § Paracide § Parazene § Paramoth § Santochlor § Paranuggets § di-Chloricide § Para Chrystals § p-Dichlorobenzene § Caswell Number 632 § Paradichlorobenzene § para-Dichlorobenzene- § p-Chlorophenyl Chloride § EPA Pesticide Chemical Code 061501 § RCRA Waste Number U070 § RCRA Waste Number U071 § RCRA Waste Number U072	106-46-7 CZ 4550000 DEP800	Carcinogen	---	---	55.6	75 MCL	75 MCL	N/A	10
Dichlorobenzidine, 3,3'- §§ DCB § C.I. 23060 § Curithane C126 § Dichlorobenzidine § o,o'-Dichlorobenzidine § Dichlorobenzidine Base § Benzidine, 3,3'-Dichloro- § 3,3'-Dichloro-4,4'-Diaminodiphenyl § 3,3'-Dichloro-(1,1'-Biphenyl)-4,4'-Diamine § 1,1'-Biphenyl-4,4'-Diamine, 3,3'-Dichloro- § RCRA Waste Number U073	91-94-1 DD 0524000 DEQ400	Carcinogen	---	---	312	0.21 PP	0.21 PP	N/A	20
Dichlorodifluoromethane (HM) §§ Freon 12 § F 12 § R 12 § FC 12 § Halon § CFC-12 § Arcton 6 § Electro-CF 12 § Eskimon 12 § Frigen 12 § Gentron 12 § Isceon 122 § Kaiser Chemicals 12 § Ledon 12 § Ucon 12 § Propellant 12 § Refrigerant 12 § Fluorcarbon-12 § Difluorodichloromethane § Methane, dichlorodifluoro- § RCRA Waste Number U075	75-71-8 PA 8200000 DFA600	Toxic	---	---	3.75	1,000 HA	1,000 HA	0.05	0.5
Dichloroethane, 1,2- §§ Ethylene Chloride § EDC § Brocide § 1,2-DCE § NCI C00511 § Dutch Oil § Dutch Liquid § Dichloremulsion § Di-Chlor-Mulsion § 1,2-Bichlorethane § 1,2-Dichlorethane § Ethane Dichloride § 1,2-Bichloroethane § Ethylene Dichloride § 1,2-Dichloroethane § Ethane, 1,2-Dichloro- § 1,2-Ethylene Dichloride § alpha,beta-Dichloroethane § RCRA Waste Number U077	107-06-2 KI 0525000 DFF900	Carcinogen	---	---	1.2	3.8 PP	4 HA	N/A	0.5

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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number, SAX Number (25) (26) (27)	Category (1) (2)	Aquatic Life Standards		Bio-concentration Factor (BCF) (5)	Human Health Standards (17) (16)		Trigger Value (22)	Required Reporting Value (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Dichloroethene, 1,1- **§§ Vinylidene Chloride** **§ VDC § 1,1-DCE § Sconatex § NCI C54262 § 1,1-Dichloroethene § Vinylidene Chloride § 1,1-Dichloroethylene § Vinylidene Dichloride § Ethene, 1,1-Dichloro- § Vinylidene Chloride II § Dichloroethylene, 1,1- § Ethylene, 1,1-Dichloro- § RCRA Waste Number U078**	**75-35-4** **KV 9275000** **DFI000**	**Carcinogen**	**---**	**---**	**5.6**	**0.57** **PP**	**0.6** **HA**	**N/A**	**0.5**
Dichlorophenol, 2,4- **§§ Phenol, 2,4-Dichloro** **§ DCP § 2,4-DCP § NCI C55345 § 2,4-Dichlorophenol § RCRA Waste Number U081**	**120-83-2** **SK 8575000** **DFX800**	**Toxic**	**---**	**---**	**40.7**	**77** **PP**	**77** **PP**	**10**	**10**
Dichlorophenoxyacetic Acid, 2,4- **§§ Dichlorophenoxyacetic Acid** **§ 2,4-D § Salvo § Phenox § Farmco § Amidox § Miracle § Agrotect § Weedtrol § Herbidal § Ded-Weed § Lawn-Keep § Fernimine § Crop Rider § Dichlorophenoxyacetic Acid, 2,4- § Acetic Acid, (2,4-Dichlorophenoxy)- § 2,4-Dichlorophenoxyacetic Acid, salts and esters**	**94-75-7** **AG 6825000** **DFY600**	**Toxic**	**---**	**---**	**---**	**70** **MCL**	**70** **MCL**	**0.02** **N/A**	**1**
Dichloropropane, 1,2- **§§ Propylene Chloride** **§ 1,2-Dichloropropane § NCI C55141 § Propylene Dichloride § Caswell Number 324 § Propane, 1,2-Dichloro- § a,ß-Propylene Dichloride § alpha,beta-Dichloropropane § EPA Pesticide Chemical Code 029002 § RCRA Waste Number U083**	**78-87-5** **TX 9625000** **DGF600**	**Carcinogen**	**---**	**---**	**4.11**	**5.0** **PP**	**5** **MCL**		**0.5**
Dichloropropene, 1,3- **§§ Telone II** **§ Telone § NCI C03985 § Vidden D § Dichloropropene § a-Chloroallyl Chloride § g-Chloroallyl Chloride § 1,3-Dichloropropene § 1,3-Dichloropropylene § 1,3-Dichloro-2-Propene § Propene, 1,3-Dichloro- § Telone II Soil Fumigant § 3-Chloropropenyl Chloride § alpha,gamma-Dichloropropylene**	**542-75-6** **UC 8310000** **CEF750**	**Carcinogen**	**---**	**---**	**1.91**	**3.4** **PP**	**4** **HA**	**N/A**	**0.5**

CIRCULAR DEQ-7, MONTANA NUMERIC WATER QUALITY STANDARDS(9)									
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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	**CASRN numbers, NIOSH number, SAX Number (25) (26) (27)**	**Category (1) (2)**	**Aquatic Life Standards**		**Bio-concentration Factor (BCF) (5)**	**Human Health Standards (17) (16)**		**Trigger Value (22)**	**Required Reporting Value (19)**
			Acute (3)	**Chronic (4)**		**Surface Water**	**Ground Water**		
Dieldrin **§§ ---** **§ Alvit § Quintox § Octalox § Illoxol § Dieldrex § NCI C00124 § Dieldrite § Hexachloroepoxyoctahydro-endo,exo-Dimethanonaphthalene § 3,4,5,6,9,9-Hexachloro-1a,2,2a,3,6,6a,7,7a-Octahydro-2,7:3,6-Dimethanonaphth(2,3-b)Oxirene § 2,7:3,6-Dimethanonaphth(2,3-b)Oxirene, 3,4,5,6,9,9-Hexachloro-1a,2,2a,3,6,6a,7,7a-Octahydro- § 1,2,3,4,10,10-Hexachloro-6,7-Epoxy-1,4,4a,5,6,7,8,8a-Octahydro-Endo, Exo-1,4:5,8-Dimethanonaphthalene§ SHA 045001 § 1,4:5,8-Dimethanonaphthalene § RCRA Waste Number P037**	**60-57-1** **IO 1750000** **DHB400**	**Carcinogen**	**0.24** **PP**	**0.056** **PP**	**4,670**	**0.00052** **PP**	**0.02** **HA**	**N/A**	**0.02**
Diethyl Phthalate **§§ ---** **§ Anozol § Neantine § Solvanol § NCI C60048 § Placidole E § Ethyl Phthalate § Diethylphthalate § Diethyl-o-Phthalate § 1,2-Benzenedicarboxylic Acid, Diethyl Ester § RCRA Waste Number U088**	**84-66-2** **TI 1050000** **DJX000**	**Toxic**	**---**	**---**	**73**	**17,000** **PP**	**17,000** **PP**	**0.25**	**10**
Difenoconazole **§§ ---** **§ 1-[2-[2-chloro-4-(4-chlorophenoxy)phenyl1]-4-methyl-1,3-dioxolan-2ymethyl]-1H-1,2,4-triazole § CGA169374 § Dividend § Dragon § Plover § Score § Score EC250**	**119446-68-3**	**Carcinogen**				**70** **HA**	**70** **HA**		
Dimethenamid and degredate demethenamid OA **§ 2-Chloro-N-(2,4-dimethyl-3-thienyl)-N-(2-methoxy-1-methylethyl)acetamide § San 682H § Frontier herbicide § EPA pesticide Code 129051**	**87674-68-8**	**Carcinogen**				**400** **HA**	**400** **HA**		
Dimethoate **§§ ---**	**60-51-5**	**Toxic**	**---**	**---**	**---**	**7** **HA**	**7** **HA**	**---**	**---**
Dimethrin **§§ ---**	**70-38-2**	**Toxic**	**---**	**---**	**---**	**2,000** **HA**	**2,000** **HA**	**---**	**---**

CIRCULAR DEQ-7, MONTANA NUMERIC WATER QUALITY STANDARDS(9)									
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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	**CASRN numbers, NIOSH number, SAX Number (25) (26) (27)**	**Category (1) (2)**	**Aquatic Life Standards**		**Bio-concentration Factor (BCF) (5)**	**Human Health Standards (17) (16)**		**Trigger Value (22)**	**Required Reporting Value (19)**
			Acute (3)	**Chronic (4)**		**Surface Water**	**Ground Water**		
Dimethyl Phthalate **§§ ---** **§ DMP § NTM § ENT 262 § Mipax § Avolin § Fermine § Solvanom § Solvarone § Palatinol M § Methyl Phthalate § Dimethylphthalate § Phthalic Acid, Dimethyl Ester § Dimethyl Benzene-o-Dicarboxylate § Dimethyl 1,2-Benzenedicarboxylate § 1,2-Benzenedicarboxylic Acid, Dimethyl Ester**	**131-11-3** **TI 1575000** **DTR200**	**Toxic**	**---**	**---**	**36**	**270,000** **PP**	**270,000** **PP**	**0.04**	**10**
Dimethylphenol, 2,4- **§§ Phenol, 2,4-Dimethyl-** **§ m-Xylenol § 2,4-Xylenol § 4,6-Dimethylphenol § Caswell Number 907A § 2,4-Dimethyl Phenol § 1-Hydroxy-2,4-Dimethylbenzene § 4-Hydroxy-1,3-Dimethylbenzene § EPA Pesticide Chemical Code 086804 § RCRA Waste Number U101**	**105-67-9** **ZE 5600000** **XKJ500**	**Toxic**	**---**	**---**	**93.8**	**380** **PP**	**380** **PP**	**10**	**10**
Dinitro-o-Cresol, 4,6- **§§ Dinitrocresol** **§ Detal § Sinox § DNOC § Arborol § Capsine § Dinitrol § Trifocide § Antinonin § Winterwash § Dinitro-o-Cresol § 2,4-Dinitro-o-Cresol § 4,6-Dinitro-o-Cresol § o-Cresol, 4,6-dinitro- § 2-Methyl-4,6-Dinitrophenol § 4,6-Dinitro-2-Methylphenol § 2,4-Dinitro-6-Methylphenol § 3,5-Dinitro-2-Hydroxytoluene § Phenol, 2-Methyl-4,6-Dinitro- § Caswell Number 390 § RCRA Waste Number P047**	**534-52-1** **GO 9625000** **DUT400**	**Toxic**	**---**	**---**	**5.5**	**13** **PP**	**13** **PP**	**---**	**50**
Dinitrophenol, 2,4- **§§ Phenol, 2,4-Dinitro** **§ Nitro § Kleenup § Aldifen § 2,4-Dinitrophenol § 2,4-DNP § Chemox PE § Maroxol-50 § Solfo Black B § alpha-Dinitrophenol § Dinitrophenol, 2,4- § Tertrosulphur Black PB § 1-Hydroxy-2,4-Dinitrobenzene § RCRA Waste Number P048**	**51-28-5** **SL 2800000** **DUZ000**	**Toxic**	**---**	**---**	**1.5**	**69** **PP**	**69** **PP**	**13**	**50**
Dinitrotoluene, 2,4- **§§ Toluene, 2,4-Dinitro** **§ 2,4-DNT § NCI C01865 § 2,4-Dinitrotoluol - § Benzene, 1-Methyl-2,4-Dinitro- § RCRA Waste Number U105**	**121-14-2** **XT 1575000** **DVH000**	**Carcinogen**	**---**	**---**	**3.8**	**1.1** **PP**	**1.1** **PP**	**N/A**	**10**

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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number, SAX Number (25) (26) (27)	Category (1) (2)	Aquatic Life Standards		Bio-concentration Factor (BCF) (5)	Human Health Standards (17) (16)		Trigger Value (22)	Required Reporting Value (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Dinitrotoluene, 2,6- **§§ Toluene-dinitro** **§ 2,4-DNT § Methyl-1,3-Dinitrobenzene** **§ RCRA Waste Number U106**	**606-20-2** **XT 1925000** **DVH400**	**Carcinogen**	**---**	**---**	**---**	**0.5** **HA**	**0.5** **HA**	**0.01**	**---**
Dinoseb **§§ ---** **§ DNBP § DBNF § Aretit § Basanite § Caldon § Sparic § Kiloseb § Spurge § Premerge § Dinitro § Hel-Fire § SHA 037505 § Dow General § Sinox General § Dow General Weed Killer § Vertac General Weed Killer § 2-sec-Butyl-4,6-Dinitrophenol § Dinitro-Ortho-Sec-Butyl Phenol § 2-(1-Methylpropyl)-4,6-Dinitrophenol § 4,6-Dinitro-2-(1-Methyl-n-Propyl)Phenol§ Phenol, 2-(1-Methylpropyl)-4,6-Dinitro- § RCRA Waste Number P020**	**88-85-7** **SJ 9800000** **BRE500**	**Toxic**	**---**	**---**	**---**	**7** **MCL**	**7** **MCL**	**0.19**	**1.5**
Dioxin --Chlorinated Dibenzo-p-dioxins and Chlorinated Dibenzofurans Calculation of an equivalent concentration of 2,3,7,8-TCDD is to be based on congeners of CDDs/CDFs and the toxicity equivalency factors (TEF) in van den Berg, M: et al. (2006) The 2005 World Health Organization Re-evaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds. Toxicological Sciences 93(2):223-241.	**1746-01-6**	**Carcinogen**	**---**	**---**	**5,000**	**0.00000005 (10)** PP	**0.000002 (10)** **HA**	**N/A**	**footnote (10)**
Diphenamid **§§ ---**	**957-51-7**	**Carcinogen**	**---**	**---**	**---**	**200** **HA**	**200** **HA**	**N/A**	**---**
Diphenylhydrazine, 1,2- **§§ Hydrazine, 1,2-Diphenyl-** **§ Hydrazobenzene § NCI C01854 § N,N'-Bianiline § Benzene, Hydrazodi- § (sym)-Diphenylhydrazine § 1,2-Diphenylhydrazine § RCRA Waste Number U109**	**122-66-7** **MW 2625000** **HHG000**	**Carcinogen**	**---**	**---**	**24.9**	**0.36** **PP**	**0.36** **PP**	**N/A**	**10**

CIRCULAR DEQ-7, MONTANA NUMERIC WATER QUALITY STANDARDS(9)									
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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	**CASRN numbers, NIOSH number, SAX Number (25) (26) (27)**	**Category (1) (2)**	**Aquatic Life Standards**		**Bio-concentration Factor (BCF) (5)**	**Human Health Standards (17) (16)**		**Trigger Value (22)**	**Required Reporting Value (19)**
			Acute (3)	**Chronic (4)**		**Surface Water**	**Ground Water**		
Diquat **§§ ---** **§ Actor § Feglox § Deiquat § Reglone § Aquacide § Dextrone § Paraquat § Preeglove § SHA 032201 § Weedtrine-D § Diquat Dibromide § Ethylene Dipyridylium Dibromide § 1,1-Ethylene 2,2-Dipyridylium Dibromide § 5,6-Dihydro-Dipyrido(1,2a,1c)Pyrazinium Dibromide § 9,10-Dihydro-8a,10a-Diazoniaphenanthrene(1,1'-Ethylene-2,'-Bipyridylium)Dibromide**	**85-00-7** **JM 5690000** **DWX800**	**Toxic**	**---**	**---**	**---**	**20** **MCL**	**20** **MCL**	**0.44**	**10**
Disulfoton **§§ ---** **§ Disyston**	**298-04-4**	**Toxic**	**---**	**---**	**---**	**0.3** **HA**	**0.3** **HA**	**0.07**	**---**
Diuron **§§ ---** **§ Karmex**	**330-54-1**	**Toxic**	**---**	**---**	**---**	**10** **HA**	**10** **HA**	**1**	**---**
Endosulfan **§§ ---** **§ NCI C00566 § Malixv § Ensure § Beosit § Endocel § Thiodan § Cyclodan § Crisulfan § Benzoepin § Thiosulfan § SHA 079401 § Chlorthiepin § Endosulfan (mixed isomers) § Hexachlorohexahydromethano 2,4,3-Benzodioxathiepin-3-Oxide § 1,4,5,6,7,7-Hexachloro-5-Norbornene-2,3-Dimethanol Cyclic Sulfite § 5-Norbornene-2, 3-Dimethanol, 1,4,5,6,7,7-Hexachloro Cyclic Sulfite § 6,7,8,9,10,10-Hexachloro-1,5,5a,6,9,9a-Hexahydro-6,9-Methano-2,4,3-Benzodioxathiepin-3-Oxide § 6,9-Methano-2,4,3-Benzodioxathiepin, 6,7,8,9,10,10-Hexachloro-1,5,5a,6,9,9a-Hexahydro-, 3-Oxide § RCRA Waste Number P050**	**115-29-7** **RB 9275000** **BCJ250**	**Toxic**	**0.11** **PP**	**0.056** **PP**	**270**	**62** **PP**	**62** **PP**	**0.014**	**see Cis and trans isomers**
Endosulfan, I **§§ ---** **§ Thiodan I § Endosulfan-I § Alpha-Endosulfan § alpha-Endosulfan**	**959-98-8**	**Toxic**	**0.11** **PP**	**0.056** **PP**	**270**	**62** **PP**	**62** **PP**	**---**	**0.015**
Endosulfan, II **§§ ---** **§ Thiodan II § Endosulfan-II § Beta-Endosulfan § beta-Endosulfan**	**33213-65-9**	**Toxic**	**0.11** **PP**	**0.056** **PP**	**270**	**62** **PP**	**62** **PP**	**0.004**	**0.024**
Endosulfan Sulfate **§§ ---** **§ 6,9-Methano-2,3,4-Benzodioxathiepin, 6,7**	**1031-07-8**	**Toxic**			**270**	**62** **PP**	**62** **PP**	**0.05**	**0.05**

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Endothall §§ --- § Hydout § Hydrothal-47 § Aquathol § SHA 038901 § Accelerate § Tri-Endothal § Endothal Hydout § 3,6-Endooxohexahydrophthalic Acid § Phthalic Acid, Hexahydro-3,6-endo-Oxy- § 7-Oxabicyclo(2,2,1)Heptane-2,3-Dicarboxylic Acid § 1,2-Cyclohexanedicarboxylic Acid, 3,6-endo-Epoxy- § RCRA Waste Number P088	145-73-3 RN 7875000 EAR000	Toxic	---	---	---	100 MCL	100 MCL	1	8
Endrin §§ --- § NCI C00157 § Endrex § Mendrin § Nendrin § Hexadrin § SHA 041601 § Compound 269 § 1,2,3,4,10,10-Hexachloro-6,7-Epoxy-1,4,4(a)5,6,7,8,8a-Octahydro-endo § 3,4,5,6,9,9-Hexachloro-1a,2,2a,3,6,6a,7,7a-Octahydro-2, 7:3,6-Dimethanonaphth[2,3-b]oxirene § 1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-Hexachloro-6,7-Epoxy-1,4,4a,5,6,7,8,8a-Octahydro-Endo,Endo- § RCRA Waste Number P051	72-20-8 IO 1575000 EAT500	Toxic with BCF >300	0.043 PP	0.0036 PP	3,970	0.059 PP	2 MCL	N/A	0.3
Endrin Aldehyde §§ ---	7421-93-4	Toxic with BCF >300	---	---	3,970	0.29 PP	0.29 PP	N/A	0.025
Epichlorohydrin §§ --- § ECH § Epoxy Propane § -Epichlorohydrin § Chloromethyloxirane § RCRA Waste Number U041 § y-Chloropropyleneoxide § 2-Chloropropylene Oxide § Glycerol Epichlorhydrin § 2,3-Epoxypropyl Chloride § 1-Chlor-2,3-Epoxypropane§ 3-Chlor-1,2-Epoxypropane	106-89-8 TX 4900000 CGN750	Carcinogen	---	---	---	30 HA	30 HA	N/A	---
***Escherichia coli* (Bacteria)**	N/A	Harmful	---	---	---	(13)	Less than 1 (6)	1 per 100ml	1 per 100ml
Ethion §§ Phosphorodithioic acid, S,S'-methylene O,O,O',O'-tetraethyl ester § Diethion § Embathion § Ethanox § Ethiol 100 § Ethodan § Ethopaz § ethyl methylene phosphorodithioate § FMC-1240 § Fosfatox E § Fosfono P § HSDB 399 § Hylemox § KWIT § NIA 1240 § Niagara 1240 § Nialate § Phosphotox E § RP 8167 § Rhodocide § Rodocid § Vegfru fomisate	563-12-2	Toxic				4 HA	4 HA		

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Ethofumesate **§§ 2-Ethoxy-2,3-dihydro-3,3-dimethyl-5-benzofuranyl methanesulfonate § BRN 5759730 § CR 14658 § Caswell #427BB § HSDB 7451 § Nortron § Progress § Tramat**	**26225-79-6**	**Toxic**				**9000** **HA**	**9000** **HA**		
Ethylbenzene **§§ ---** **§ EB § NCI C56393 § Ethylbenzol § Phenylethane § Ethyl Benzene § Benzene, Ethyl**	**100-41-4** **DA 0700000** **EGP500**	**Toxic**	**---**	**---**	**37.5**	**530** **PP**	**700** **MCL**	**0.002**	**0.5**
Fenamiphos **§§ ---** **§ Nemacur**	**22224-92-6**	**Toxic**	**---**	**---**	**---**	**2** **HA**	**2** **HA**	**N/A**	**---**
Fenbuconazole **§§ 1H-1,2,4-Triazole-1-propanenitrile,alpha-(2-(4-chlorophenyl)ethyl)-alpha-phenyl-** **§ 4-(4-chlorophenyl)-2-(1H-1,2,4-triazol-1-ylmethyl)butyronitrile**	**114369-43-6**	**Carcinogen**				**100** **HA**	**100** **HA**		
Flucarbazone **§§ Flucarbazone** **§ 1H-1,2,4-Triazole-1carboxamide, 4,5-dihydro-3-methoxy-4-methyl-5-oxo-N((2-(trifluoromethoxy)phenyl)sulfonyl)-**	**181274-17-9**	**Toxic**				**3000** **HA**	**3000** **HA**		
Flucarbazone sulfonamide **§§** **§**	**37526-59-3**	**Toxic**				**3000** **HA**	**3000** **HA**		
Fluometuron **§§ ---** **§ Flo-Met**	**2164-17-2**	**Carcinogen**	**---**	**---**	**---**	**90** **HA**	**90** **HA**	**N/A**	**---**
Fluoranthene **§§ ---** **§ Idryl § Benzo(jk)Fluorene § Benzo(j,k)Fluorene § 1,2-Benzacenaphthene § 1,2-(1,8-Naphthylene)Benzene § Benzene, 1,2-(1,8-Naphthalenediyl)- § RCRA Waste Number U120**	**206-44-0** **LL 4025000** **FDF000**	**Toxic** **BCF >300**	**---**	**---**	**1,150**	**130** **PP**	**130** **PP**	**N/A**	**10**
Fluorene (PAH) **§§ ---** **§ 9H-Fluorene § Diphenylenemethane § o-Biphenylenemethane § 2,2'-Methylenebiphenyl**	**86-73-7**	**Toxic**	**---**	**---**	**30**	**1,100** **PP**	**1,100** **PP**	**0.25**	**0.25**

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Fluoride **§§ Flourine** **§ Fluoride § Fluoride(1-) § Perfluoride § Fluoride Ion § Fluorine, Ion § Soluable§ Fluoride § Hydrofluoric Acid, Ion(1-) § RCRA Waste Number P056**	**16984-48-8** **NIOSH: LM (** **FEX875**	**Toxic**	**---**	**---**	**---**	**4,000** **MCL**	**4,000** **MCL**	**5**	**100**
Fonofos **§§ ---** **§ Dyfonate**	**944-22-9**	**Toxic**	**---**	**---**	**---**	**10** **HA**	**10** **HA**	**---**	**---**
Gamma Emitters (11) **§§ ---**	**Multiple**	**Carcinogen / Radioactive**	**---**	**---**	**---**	**0.4 mrem /yr** **MCL**	**0.4 mrem /yr** **MCL**	**N/A**	**---**
gamma-Chlordane **§§ ---** **§ Chlordane, beta-Isomer**	**5566-34-7**	**Carcinogen**	**---**	**---**	**14,100**	**0.0080** **PP**	**1** **HA**	**N/A**	**0.4**
gamma-hexachlorocyclohexane **§§ Lindane** **§ BHC § -BHC § Gamene § Lintox § Lentox § Hexcide § Aparsin § Agrocide § Afcide § BHC-gamma § gamma-BHC § HCH-gamma § gamma-HCH § Hexachlorocyclohexane § gamma-Hexachlorobenzene § gamma-Benzenehexachloride § gamma-Benzene Hexachloride § Hexachlorocyclohexane-gamma § Hexachlorocyclohexane (gamma) § Benzene Hexachloride-gamma-isomer § gamma-1,2,3,4,5,6-Hexachlorocyclohexane § Cyclohexane, 1,2,3,4,5,6-Hexachloro-, gamma-isomer § 1,2,3,4,5,6-Hexachlorocyclohexane, gamma-isomer § 1-alpha,2-alpha,3-beta,4-alpha, 5-alpha,6-beta-Hexachlorocyclohexane § Cyclohexane, 1,2,3,4,5,6-Hexachloro-, (1-alpha, 2-alpha, 3-beta, 4-alpha, 5-alpha, 6-beta)**	**58-89-9** **GV 4900000** **BBQ500**	**Carcinogen**	**0.95** **PP**	**---**	**130**	**0.2** **HA**	**0.2** **HA**	**N/A**	**0.1**
Gases, dissolved, total-pressure (20) **§§ ---**	**Multiple**	**Toxic**	**110% of saturation**	**---**	**---**	**---**	**---**	**---**	**---**
Glyphosate **§§ ---** **§ Jury § Honcho § Rattler § Weedoff § Roundup § Glifonox § n-(Phosphonomethyl)-Glycine § Glycine, n-(Phosphonomrthyl)-** **§ Glyphosate plus inert ingrediants § MON 0573**	**1071-83-6** **MC 1075000** **PHA500**	**Toxic**	**---**	**---**	**---**	**700** **MCL**	**700** **MCL**	**6**	**50**
Glyphosate Isopropylamine Salt **§§ ---** **§ SHA 103601**	**38641-94-0**	**Toxic**	**---**	**---**	**---**	**700** **HA**	**700** **HA**	**6**	**50**

CIRCULAR DEQ-7, MONTANA NUMERIC WATER QUALITY STANDARDS(9)									
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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	**CASRN numbers, NIOSH number, SAX Number (25) (26) (27)**	**Category (1) (2)**	**Aquatic Life Standards**		**Bio-concentration Factor (BCF) (5)**	**Human Health Standards (17) (16)**		**Trigger Value (22)**	**Required Reporting Value (19)**
			Acute (3)	**Chronic (4)**		**Surface Water**	**Ground Water**		
Guthion §§ --- § DBD § NCI C00066 § Carfene § Gothnion § Azinphos § Crysthyon § Gusathion § Bay 17147 § Methylazinphos § Methyl Guthion § Methyl-Guthion § Azinphos-Methyl § Azinphos Methyl § Caswell Number 374 § o,o-Dimethylphosphorodithioate S-Ester § 3-Mercaptomethyl)-1,2,3-Benzotriazin-4(3H)-One § Benzotriazinedithiophosphoric Acid Dimethoxy Ester § 3-Dimethoxyphosphinothiomethyl-1,2,3-Benzotriazin-4(3H)-One § Phosphorodithioic Acid, O,O-Dimethyl Ester, S-Ester with 3-(Mercaptomethyl)-1,2,3-Benzotriazin-4(3H)-One § EPA Pesticide Chemical Code 058001	**86-50-0 TE 1925000 ASH500**	**Toxic**	**---**	**0.01 NPP**	**---**	**---**	**---**	**---**	**---**
Heptachlor §§ --- § NCI C00180 § Drinox § Heptamul § Agroceris § Heptagran § SHA 04481 § Rhodiachlor § Velsicol-104 § 3,4,5,6,7,8,8a-heptachlorodicyclopentadiene § Dicyclopentadiene, 3,4,5,6,7,8,8a-Heptachloro- § 1,4,5,6,7,8,8-Heptachloro-3a,4,7,7a-Tetrahydro-4,7-Methanol-1H-Indene § 4,7-Methano-1H-Indene, 1,4,5,6,7,8,8-Heptachloro-3a,4,7,7a-Tetrahydro- § 1(3a),4,5,6,7,8,8-Heptachloro-3a(1),4,7,7a-Tetrahydro-4,7-Methanoindene § RCRA Waste Number P059	**76-44-8 PC 0700000 HAR000**	**Carcinogen**	**0.26 PP**	**0.0038 PP**	**11,200**	**0.00079 PP**	**0.08 HA**	**N/A**	**0.2**
Heptachlor Epoxide §§ --- § HCE § Velsicol 53-CS-17 § Epoxyheptachlor § 1,4,5,6,7,8,8-Heptachloro-2,3-Epoxy-2,3,3a,4,7,7a-Hexahydro-4,7-Methanoindene § 2,5-Methano-2H-Indeno[1,2b]Oxirene, 2,3,4,5,6,7,7-Heptachloro-1a,1b,5,5a,6,6a-Hexahydro- (alpha, beta, and gamma isomers)	**1024-57-3 PB 9450000 EBW500**	**Carcinogen**	**0.26 PP**	**0.0038 PP**	**11,200**	**0.00039 PP**	**0.04 HA**	**N/A**	**0.1**

CIRCULAR DEQ-7, MONTANA NUMERIC WATER QUALITY STANDARDS(9)									
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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	**CASRN numbers, NIOSH number, SAX Number (25) (26) (27)**	**Category (1) (2)**	**Aquatic Life Standards**		**Bio-concentration Factor (BCF) (5)**	**Human Health Standards (17) (16)**		**Trigger Value (22)**	**Required Reporting Value (19)**
			Acute (3)	**Chronic (4)**		**Surface Water**	**Ground Water**		
Hexachlorobenzene **§§ ---** **§ HCB § Amatin § Smut-Go § Sanocide § Anticarie § Bunt-Cure § Bunt-No-More § Perchlorobenzene § Phenyl Perchloryl § No Bunt Liquid § Julin's Carbon Chloride § Co-op Hexa § Hexa C.B. § Benzene, Hexachloro-**	**118-74-1** **DA 2975000** **HCC500**	**Carcinogen**	**---**	**---**	**8,690**	**0.0028** **PP**	**0.2** **HA**	**N/A**	**0.2**
Hexachlorobutadiene **§§ ---** **§ 1,3-Hexachlorobutadiene § 1,3-Butadiene, Hexachloro- § 1,1,2,3,4,4-Hexachloro-1,3-Butadiene § 1,3-Butadiene, 1,1,2,3,4,4-Hexachloro- § HCBD § Dolan-Pur § Perchlorobutadiene § RCRA Waste Number U128**	**87-68-3** **EJ 0700000** **PCF000**	**Carcinogen**	**---**	**---**	**2.78**	**4.4** **PP**	**5** **HA**	**N/A**	**10**
Hexachlorocyclopentadiene **§§ ---** **§ HEX § HCP § PCL § C-56 § HCCPD § NCI C55607 § Hexachloropentadiene § Perchlorocyclopentadiene § 1,3-Cyclopentadiene, 1,2,3,4,5,5-Hexachloro- § RCRA Waste Number U130**	**77-47-4** **GY 1225000** **HCE500**	**Toxic**	**---**	**---**	**4.34**	**40** **PP**	**50** **MCL**	**1**	**5**
Hexachloroethane **§§ ---** **§ Avlotane § Distokal § Distopan § Distopin § Egitol § Falkitol § Fasciolin § NCI C04604 § Phenohep § Mottenhexe § Perchloroethane § Hexachloroethylene § Ethane, Hexachloro- § Carbon Hexachloride § Ethane Hexachloride § Ethylene Hexachloride § 1,1,1,2,2,2-Hexachloroethane § RCRA Waste Number U131**	**67-72-1** **KI 4025000** **HCI000**	**Carcinogen**	**---**	**---**	**86.9**	**14** **PP**	**30** **HA**	**N/A**	**10**
Hexazinone **§§ ---**	**51235-04-2**	**Toxic**	**---**	**---**	**---**	**400** **HA**	**400** **HA**	**1**	**---**

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Hydrogen Sulfide §§ --- § Stink Damp § Sulfur Hydride § Hydrogen Sulphide § Dihydrogen Sulfide § Dihydrogen Monosulfide § Hydrogen Sulfuric Acid § Hydrosulfuric Acid § Sulfurated Hydrogen § RCRA Waste Number U135	7783-06-4 MX 1225000 HIC500	Toxic	---	2 NPP	---	---	---	NA	---
Hydroxyatrazine §§ --- § Hydroxydechloroatrazine	2163-68-0	Toxic	---	---	---	70 HA	70 HA	---	---
Imazalil (Parent name Enilconazole) §§ 1-(2-(2,4-dichlorophenyl)-2-(2-propenyloxy)ethyl)-1H-imidazole § Enilconazole § BRN 054683 § Caswell #497AB § Chloramizol § Deccozil § Secozil S 75 § Fungaflor § HSDB 6672 § R 23979 § EPA Pesticide Code 111901	35554-44-0	Carcinogen				6 HA	6 HA		
Imazamethabenz-methyl ester (includes the metabolite imazamethabenz methyl acid) (33) §§ Assert § ---	81405-85-8	Toxic	---	---	---	400 I	400 I	N/A	---
Imazamox §§ --- § Ammonium salt of imazamox	114311-32-9	Toxic	---	---	---	20,000 HA	20,000 HA	---	---
Imazapic §§ Imazapic § AC263222, Cadre, Imazameth, Imazamethapyr, Imazmethapyr	104098-48-8	Toxic				4000 HA	4000 HA		
Imazapyr §§ Arsenal § ---	81334-34-1	Toxic	---	---	---	21,000 I	21,000 I	N/A	---
Imazethapyr §§ 3-pyridinecarboxilic acid, 2-(4,5-dihydro-4-methyl-4-(1-methylethyl)-5oxo-1H-imidazol-2-yl)-5-ethyl- § AC 263,499 § CL263499 § HSDB 6678 § Pivot § Pursuit § EPA Pesticide Code# 128922	81335-77-5	Toxic				20,000 HA	20,000 HA		
Imidacloprid §§ ---	105827-78-9 138261-41-3	Toxic	---	---	---	400 HA	400 HA	---	---
Indeno(l,2,3-cd)pyrene (PAH) §§ --- § o-Phenylenepyrene § 2,3-Phenylenepyrene § 2,3-o-Phenylenepyrene § Indeno (l,2,3-cd) Pyrene § 1,10-(o-Phenylene)Pyrene § 1,10-(1,2-Phenylene)Pyrene § RCRA Waste Number U137	193-39-5 NK 9300000 IBZ000	Carcinogen	---	---	30	0.038 PP	0.5 (29) HA	N/A	0.10

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Iron §§ Fe § Ancor EN 80/150+A622 § Armco Iron	7439-89-6 NO 4565500 IGK800	Harmful (aquatic life)	---	1,000 NPP	---	(23)	(23)	N/A	50
Isophorone §§ --- § Isoforon § NCI C55618 § Isoacetophorone § alpha-Isophorone § 1,1,3-Trimethyl-3-Cyclohexene-5-One § 3,5,5-Trimethyl-2-Cyclohexene-1-One § 3,5,5-Trimethyl-2-Cyclohexone	78-59-1 GW 7700000 IHO000	Carcinogen	---	---	4.38	350 PP	400 HA	N/A	10
Lead §§ Pb § C.I. 77575 § C.I. Pigment Metal 4 § Glover § Lead Flake § Lead 22 § Omaha § Omaha & Grant § SI § SO	7439-92-1 OF 7525000 LCF000	Toxic	13.98 @ 25 mg/l hardness (12) PP	0.545 @ 25 mg/l hardness (12) PP	49	15 PP	15 PP	0.1	0.5
m-Xylene §§ --- § m-Xylol § 1,3-Xylene § meta-Xylene § m-Dimethylbenzene § m-Methyltolulene § 1.3-Dimethylbenzene § 1,3 Dimethyl Benzene	108-38-3 ZE 2275000 XHA000	Toxic	---	---	1.17	10,000 MCL	10,000 MCL	0.5	1.5
Malathion §§ --- § Formal § Sumitox § Emmatos § Celthion § Forthion § Malacide § Kop-Thion § Calmathion § Carbethoxy § NCI C00215 § Carbethoxy Malathion § SHA 057701 § Phosphothion § S-1,2-Bis(Ethoxycarbonyl)Ethyl-O,O-Dimethyl Thiophosphate § O, O-Dimethyl-S-(1,2-Dicarbethoxyethyl) Dithiophosphate § O,O-Dimethyl S-1,2-Di(Ethoxycarbamyl)Ethyl Phosphorodithioate § Succinic Acid, mercapto-, diethyl ester, S-Ester with O,O-Dimethyl Phosphorodithioate	121-75-5 WM 8400000 CBP000	Toxic	---	0.1 NPP	---	100 HA	100 HA	---	---
Manganese §§ Mn § Colloidal Manganese § Magnacat § Tronamang	7439-96-5 OO 9275000 MAP750	Harmful	---	---	---	(24)	(24)	N/A	5
MCPA §§ 4-chloro-2 methylphenoxy acetic acid	94-74-6	Toxic	---	---	---	4 HA	4 HA	N/A	---

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
MCPP §§ 2-(4-chloro-2-methylphenoxy)propionic acid § Mecoprop § 2M 4KhP § 2M-4CP § Anicon B § Anicon P § CMPP § Caswell #559 § Celatox CMPP § iso-Cornox § Isocarnox § Kilprop § Liranox § Mechlorprop § Mecomec § Mecopar § Mecopeop § Mecoper § Mecopex § Mecoprop § Mecoturf § Mecprop § Mepro § Methoxone § Morogal § Okultin § Proponex-pluse § RD 4593 § Rankotex § Runcatex § SYS 67 Mecmin § U 46 KV fluid § Vi-Par § Vi-Pex § EPA pesticide Code #031501	7085-19-0 93-65-2	Toxic	---	---	---	7 I	7 I	---	---
Mercury §§ Hg § Colloidal Mercury § Mercury, Metallic § NCI C60399 § Quick Silver § RCRA Waste Number U151	7439-97-6 OV 4550000 MCW250	Toxic with BCF >300	1.7 PP	0.91 PP	5,500	0.05 PP	2 MCL	N/A	0.01
Metalaxyl § Ridomil § ---	57837-19-1	Toxic	---	---	---	420 I	420 I	3.5	---
Methamidophos §§ Monitor § ---	10265-92-6	Toxic	---	---	---	0.35 I	0.35 I	---	---
Methomyl §§ Lannate § ---	16752-77-5	Toxic	---	---	---	200 HA	200 HA	1	---
Methoxychlor §§ --- § DMDT § Metox § Moxie § Methoxcide § NCI C00497 § Methoxy-DDT § Dimethoxy-DDT § 1,1,1-Trichloro-2,2-Bis(p-Methoxyphenyl)Ethane § Benzene, 1,1'-(2,2,2-Trichloroethylidene)Bis[4-Methoxy- § 1,1'-(2,2,2-Trichloroethylidene)Bis[4-Methoxybenzene] § Ethane, 1,1,1-Trichloro-2,2-Bis(p-Methoxyphenyl)- § RCRA Waste Number U247	72-43-5 KJ 3675000 DOB400	Toxic	---	0.03 NPP	---	40 MCL	40 MCL	---	1
Metsulfuron Methyl §§ Ally § ---	74223-64-6	Toxic	---	---	---	1,750 I	1,750 I	0.1	---

CIRCULAR DEQ-7, MONTANA NUMERIC WATER QUALITY STANDARDS(9)									
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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	**CASRN numbers, NIOSH number, SAX Number (25) (26) (27)**	**Category (1) (2)**	**Aquatic Life Standards**		**Bio-concentration Factor (BCF) (5)**	**Human Health Standards (17) (16)**		**Trigger Value (22)**	**Required Reporting Value (19)**
			Acute (3)	**Chronic (4)**		**Surface Water**	**Ground Water**		
Methyl Bromide §§Bromomethane (HM) § EDCO § Celfume § Dowfume § Methogas § SHA 053201 § Brom-O-Sol § Brom-O-Gas § Terr-O-Gas § Halon 1001 § Terr-O-Cide § Bromo-O-Gas § Bromo Methane § Methylbromide § Methane, Bromo- § Monobromomethane § RCRA Waste Number U029	**74-83-9 PA 4900000 BNM500**	**Toxic**	**---**	**---**	**3.75**	**47 PP**	**10 HA**	**0.11**	**0.5**
Methyl Chloride §§ Chloromethane § Arctic § Monochloromethane § RCRA Waste Number U045	**74-87-3 PA 6300000 CHX500**	**Toxic**	**---**	**---**	**3.75**	**30 HA**	**30 HA**	**0.08**	**---**
Methylene chloride §§ Dichloromethane (HM) § R 30 § DCM § Freon 30 § Aerothene MM § NCI C50102 § Solmethine § Methane Dichloride § Methane, Dichloro- § 1,1-Dichloromethane § Methylene Bichloride § Methylene Dichloride	**75-09-2 PA 8050000 MDR000**	**Carcinogen**	**---**	**---**	**0.9**	**5 MCL**	**5 MCL**	**N/A**	**0.5**
Metolachlor (includes the metabolites metolachlor ESA and metolachlor OA (34)) §§ Dual § ---	**51218-45-2**	**Carcinogen**	**---**	**---**	**---**	**100 HA**	**100 HA**	**N/A**	**---**
Metribuzin §§ Sencor § ---	**21087-64-9**	**Toxic**	**---**	**---**	**---**	**200 HA**	**200 HA**	**10**	**---**
Mirex §§ --- § NCI C06428 § Dechlorane § Bichlorendo § Ferriamicide § Perchloropentacyclodecane § Dodecachloropentacyclodecane § Hexachlorocyclopentadiene Dimer § Cyclopentadiene, Hexachloro-, Dimer § Perchloropentacyclo(5.2.1.0[sup 2,6].0[sup 3,9].0[sup 5,8])Decane § Dodecachlorooctahydro-1,3,4-Metheno-2H-Cyclobuta (c,d)Pentalene § 1,1a,2,2,3,3a,4,5,5,5a,5b,6-Dodecachlorooctahydro-1,3,4-Metheno-1H-Cyclobuta(cd) Pentalene § 1,3,4-Metheno-1H-Cyclobuta[cd]Pentalene, 1,1a,2,2,3,3a,4,5,5,5a,5b,6,-Dodecachlorooctahydro-	**2385-85-5 PC 8225000 MQW500**	**Carcinogen**	**---**	**0.001 NPP**	**---**	**14 I**	**14 I**	**0.01**	**0.1**
MTBE §§ Methyl Tertiary-Butyl Ether	**1634-04-4**	**Harmful**	**---**	**---**	**---**	**30 (21)**	**30 (21)**	**---**	**---**

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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number, SAX Number (25) (26) (27)	Category (1) (2)	Aquatic Life Standards		Bio-concentration Factor (BCF) (5)	Human Health Standards (17) (16)		Trigger Value (22)	Required Reporting Value (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
N-Nitrosodimethylamine §§ Dimethylnitrosamine A707 § DMN § NDMA § DMNA § Nitrosodimethylamine § Dimethylnitrosoamine § N-Nitrosodimethylamine § N,N-Dimethylnitrosamine § Methylamine, N-Nitrosodi- § Dimethylamine, N-Nitroso- § N-Methyl-N-Nitrosomethanamine § Methamine, N-Methyl-N-Nitroso- § Methanamine, N-Methyl-N-Nitroso- § RCRA Waste Number P082	62-75-9 IQ 0525000 DSY400	Carcinogen	---	---	0.026	0.0069 PP	0.0069 PP	N/A	10
N-Nitrosodiphenylamine §§ --- § NDPA § NDPhA § Vultrol § Curetard A § NCI C02880 § Redax § TJP § Retarder J § Vulcalent A § Vulcatard § Vultrol § Nitrosodiphenylamine § Diphenylnitrosamine § N,N-Diphenylnitrosamine § N-Nitroso-N-Phenylaniline § Diphenylamine, N-Nitroso- § Benzenamine, N-Nitroso-N-Phenyl-	86-30-6 JJ 9800000 DWI000	Carcinogen	---	---	136	33 PP	33 PP	N/A	10
n-Dioctyl Phthalate §§ --- § DNOP § PX-138 § Vinicizer 85 § Dinopol NOP § n-Octyl Phthalate § Octyl Phthalate § Dioctyl Phthalate § Di-n-Octyl Phthalate § Di-sec-Octyl Phthalate § 1,2-Benzenedicarboxylic Acid, Dioctyl Ester § RCRA Waste Number U107	117-84-0 TI 1925000 DVL600	Carcinogen	---	---	---	---	---	N/A	10
N-Nitrosodi-N-Propylamine §§ --- § DPN § DPNA § NDPA § Dipropylnitrosamine § N-Nitrosodipropylamine § Di-n-Propylnitrosamine § Dipropylamine, N-Nitroso- § N-Nitrosodi-n-propylamine § N-Nitroso-di-n-propylamine § 1-Propanamine, N-Nitroso-n-Propyl- § RCRA Waste Number U111	621-64-7 JL 9700000 DWU600	Carcinogen	---	---	1.13	0.05 PP	0.05 PP	N/A	10
N-Nitrosopyrrolidine §§ --- § NPYR § NO-pyr § N-N-pyr § 1-Nitrosopyrrolidene § Pyrrolidine, 1-Nitroso- § Tetrahydro-N-Nitrosopyrrole § Pyrrole, Tetrahydro-N-Nitroso- § RCRA Waste Number U180	930-55-2 UY 1575000 NLP500	Carcinogen	---	---	0.055	0.16 PP	0.16 PP	N/A	10

CIRCULAR DEQ-7, MONTANA NUMERIC WATER QUALITY STANDARDS(9)									
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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	**CASRN numbers, NIOSH number, SAX Number (25) (26) (27)**	**Category (1) (2)**	**Aquatic Life Standards**		**Bio-concentration Factor (BCF) (5)**	**Human Health Standards (17) (16)**		**Trigger Value (22)**	**Required Reporting Value (19)**
			Acute (3)	**Chronic (4)**		**Surface Water**	**Ground Water**		
Naphthalene **§§ Moth Balls** **§ Mighty 150 § NCI C52904 § Naphthene § White Tar§ Naphthalin § Tar Camphor § Caswell Number 587 § EPA Pesticide Chemical Code 055801 § RCRA Waste Number U165**	**91-20-3** **QJ 0525000** **NAJ500**	**Carcinogen**	**---**	**---**	**10.5**	**100** **HA**	**100** **HA**	**0.04**	**10**
Nickel **§§ Ni** **§ C.I. 77775 § Ni 270 § Nickel 270 § Ni 0901-S § Ni 4303T § NP 2 § Raney Alloy § Raney Nickel**	**7440-02-0** **QR 5950000** **NCW500**	**Toxic**	**145@25mg/l hardness (12)** **PP**	**16.1 @ 25 mg/l hardness (12)** **PP**	**47**	**100** **HA**	**100** **HA**	**0.5**	**10**
Nicosulfuron **§§ Accent** **§ ---**	**111991-09-4**	**Toxic**	**---**	**---**	**---**	**8,750** **I**	**8,750** **I**	**0.01**	**---**
Nitrate (as Nitrogen[N]) **§§ NO3**	**14797-55-8**	**Toxic**	**(8)**	**(8)**	**---**	**10,000** **MCL**	**10,000** **MCL**	**10** **surface water 5000, ground water, see ARM 7.30.715**	**10**
Nitrate plus nitrite (as Nitrogen[N]) **§§ $NO_3 + NO_2$**	**See nitrate and nitrite**	**Toxic**	**(8)**	**(8)**	**---**	**10,000** **MCL**	**10,000** **MCL**	**10,** **surface water 5000, ground water, see ARM 7.30.715**	**10**
Nitrite (as Nitrogen[N]) **§§ NO_2**	**14797-65-0**	**Toxic**	**(8)**	**(8)**	**---**	**1,000** **MCL**	**1,000** **MCL**	**4**	**10**
Nitrobenzene **§§ ---** **§ NCI C60082 § Mirbane Oil § Nitrobenzol § Oil of Mirbane § Benzene, Nitro- § Essence of Myrbane § RCRA Waste Number U169**	**98-95-3** **DA 6475000** **NEX000**	**Toxic**	**---**	**---**	**2.89**	**17** **PP**	**17** **PP**	**1.9**	**10**
Nitrogen, total inorganic (as Nitrogen[N]) **§§ the sum of ammonia, nitrite, and nitrate**	**See ammonia, nitrate and nitrite**	**Nutrient**	**(8)**	**(8)**	**---**	**---**	**---**	**10**	**10**

CIRCULAR DEQ-7, MONTANA NUMERIC WATER QUALITY STANDARDS(9)									
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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	**CASRN numbers, NIOSH number, SAX Number (25) (26) (27)**	**Category (1) (2)**	**Aquatic Life Standards**		**Bio-concentration Factor (BCF) (5)**	**Human Health Standards (17) (16)**		**Trigger Value (22)**	**Required Reporting Value (19)**
			Acute (3)	**Chronic (4)**		**Surface Water**	**Ground Water**		
Nitrophenol, 4- **§§p-Nitropheno (DOT)l** **§ 4-Hydroxynitrobenzene § NCI C55992)** **§ RCRA Waste Number U170**	**100-02-7** **SM 2275000** **NIF000**	**Toxic**	**---**	**---**	**3.31**	**60** **HA**	**60** **HA**	**2.4**	**---**
o-Nitrophenol **§§ ---** **§ 2-Nitrophenol oxynitrobenzene**	**88-75-5** **SM 2100000** **NIE500**	**Toxic**	**---**	**---**	**2.33**	**---**	**---**	**0.45**	**---**
Nitrosamines **§§ -Nitrosamide** **§ -NSC223080**	**35576-91-1**	**Carcinogen**				**0.008** **NPP**	**0.008** **NPP**		
Nitrosodibutylamine, N **§§ Dibutylnitrosamine** **§ -1-Butanamine § BRN 1760378 § CCRIS 217 § EINECS 213-101-1 § HSDB 5107 § N-butyl-N-nitroso-1-butamine § NDBA § NSC 6830 § RCRA waste number U172**	**924-16-3**	**Carcinogen**				**0.063** **NPP**	**0.063** **NPP**		
Nitrosodiethylamine, N **§§ Diethylnitrosamine** **§ -BRN 1744991 § CCRIS 239 § DEN § EINECS 200-226-1 § Ethanamine, N-ethyl-N-nitroso § HSDB 4001 § NDEA § NSC 132 § RCRA waste number U174**	**55-18-5**	**Carcinogen**				**0.008** **NPP**	**0.008** **NPP**		
Nonylphenol **§§ ---** **§ 2,6-Dimethyl-4-heptylphenol § Hydroxyl No. 253 § Potassium nonylphenate § Sodium nonylphenol § Strontium bis(nonylphenolate) § Strontium nonylphenolate**	**25154-52-3**	**Toxic**	**28** **NPP**	**6.6** **NPP**	**---**	**---**	**---**	**---**	**---**
o-Xylene **§§ ---** **§ o-Xylol § 1,2-Xylene § ortho-Xylene § o-Methyltoluene § o-Dimethylbenzene § 1,2-Dimethylbenzene § 1,2-Dimethyl Benzene**	**95-47-6** **ZE 2450000** **XHJ000**	**Toxic**	**---**	**---**	**1.17**	**10,000** **MCL**	**10,000** **MCL**	**0.5**	**1.5**

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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number, SAX Number (25) (26) (27)	Category (1) (2)	Aquatic Life Standards		Bio-concentration Factor (BCF) (5)	Human Health Standards (17) (16)		Trigger Value (22)	Required Reporting Value (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Oxamyl **§§ ---** **§ D-1410 § DPX 1410 § Insecticide-Nematicide 1410 § Vydate § Thioxamyl § Methyl 2-(Dimethylamino)-N- § Vydate L, Insecticide/Nematicide § ({[Methylamino]Carbonyl}Oxy)-2-Oxoethanimidothioate § 2-Dimethylamino-1-(Methylthio)Glyoxal O-Methylcarbamoylmonozime § S-Methyl 1-Dimethylcarbamoyl)-N ({Methylcarbamoyl}Oxy)Thioformimidate § Methyl N',N'-Dimethyl-N-({Methylcarbamoyl}Oxy)-1-Thiooxamimidate § N',N'-Dimethyl-N-[(Methylcarbamoyl)oxy]-1-Methylthiooxamimidic Acid**	**23135-22-0** **RP 2300000** **DSP600**	**Toxic**	**---**	**---**	**---**	**200** **MCL**	**200** **MCL**	**1**	**1**
Oxydemeton Methyl **§§ Metasystox R** **§ ---**	**301-12-2**	**Toxic**	**---**	**---**	**---**	**3.5** **I**	**3.5** **I**	**1.4**	**---**
Oxygen, dissolved (20) **§§ O2** **§ Oxygen, Compressed § Oxygen, Refrigerated Liquid**	**7782-44-7** **RS 2060000** **OQW000**	**Toxic**	**(15)**	**(15)**	**---**	**---**	**---**	**---**	**50**
p,p'-Dichlorodiphenyldichloroethylene **§§ DDE** **§ DDE § p,p'-DDE § 4,4'-DDE § NCI C00555 § Dichlorodiphenyldichloroethylene § Dichlorodiphenyldichloroethylene, p,p'- § 2,2'-bis(4-Chlorophenyl)-1,1-Dichloroethylene § 1,1'-(Dichloroethenylidene)bis(4-Chlorobenzene) § 2,2'-bis(p-Chlorophenyl)-1,1-Dichloroethylene § Benzene, 1,1'-(DichloroethenylideneBis[4-Chloro-**	**72-55-9** **KV 9450000** **BIM750**	**Carcinogen**	**---**	**---**	**53,600**	**0.0022** **PP**	**0.0022** **PP**	**N/A**	**0.01**

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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	**CASRN numbers, NIOSH number, SAX Number (25) (26) (27)**	**Category (1) (2)**	**Aquatic Life Standards**		**Bio-concentration Factor (BCF) (5)**	**Human Health Standards (17) (16)**		**Trigger Value (22)**	**Required Reporting Value (19)**
			Acute (3)	**Chronic (4)**		**Surface Water**	**Ground Water**		
p,p'-Dichlorodiphenyltrichloroethane §§ DDT § DDT § 4,4'-DDT § Agritan § Anoflex § Arkotine § Azotox § Bosan Supra § Bovidermol § Chlorophenothan § Chlorophenothane § Chlorophenotoxum § Citox § Clofenotane § Dedelo § § Chlorophenothane § Diphenyltrichloroethane § Dichlorodiphenyltrichloroethane § 4,4'-Dichlorodiphenyltrichloroethane § Dichlorodiphenyltrichloroethane, p,p'- § 1,1,1-Trichloro-2,2,-bis(p-Chlorophenyl) Ethane § 1,1,1-Trichloro-2,2,-bis(p-Chlorophenyl)Ethane § 1,1,1-Trichloro-2,2,-Di(4-Chlorophenyl)-Ethane § 1,1-Bis-(p-Chlorophenyl)-2,2,2-Trichloroethane § 2,2-Bis-(p-Chlorophenyl)-1,1,1-Trichloroethane A623§ alpha,alpha-Bis(p-Chlorophenyl)-beta,beta,beta-Trichlorethane	**50-29-3 KJ 3325000 DAD200**	**Carcinogen**	**0.5 PP**	**0.001 PP**	**53,600**	**0.0022 PP**	**0.0022 PP**	**N/A**	**0.06**
p,p'-Dichlorodiphenyldichloroethane §§ DDD § TDE § Dilene § NCI C00475 § Rothane § Rhothane § 4,4'-DDD § p,p'-DDD § p,p'-TDE § 4',4'-D-DDD § RCRA Waste Number U060 § Tetrachlorodiphenylethane § Dichlorodiphenyldichloroethane § Dichlorodiphenyl Dichloroethane § 2,2-bis (4-Chlorophenyl)-1,1-Dichloroethane § 1,1-Dichloro-2,2-bis(p-Chlorophenyl) Ethane § 1,1-bis(4-Chlorophenyl)-2,2-Dichloroethane § 2,2-bis(p-Chlorophenyl)-1,1-Dichloroethane § Benzene, 1,1'(2,2-Dichloroethylidene)Bis[4-Chloro-	**72-54-8 KI 0700000 BIM500**	**Carcinogen**	**---**	**---**	**53,600**	**0.0031 PP**	**0.0031 PP**	**N/A**	**0.01**
p-Bromodiphenyl Ether §§ Benzene, 1-Bromo-4-Phenoxy- § p-Bromodiphenyl Ether § 4-Bromophenoxybenzene § 4-Bromodiphenyl Ether § 1-Bromo-4-Phenoxybenzene § p-Bromophenylphenyl Ether § 4-Bromophenyl Phenyl Ether	**101-55-3 --- ---**	**Toxic with BCF >300**	**---**	**---**	**1,640**	**---**	**---**	**N/A**	**10**

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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	**CASRN numbers, NIOSH number, SAX Number (25) (26) (27)**	**Category (1) (2)**	**Aquatic Life Standards**		**Bio-concentration Factor (BCF) (5)**	**Human Health Standards (17) (16)**		**Trigger Value (22)**	**Required Reporting Value (19)**
			Acute (3)	**Chronic (4)**		**Surface Water**	**Ground Water**		
p-Chloro-m-Cresol **§§---** **§ PCMC § Parol § Aptal § Baktol § Baktolan § Ottafact § Raschit § Rasen-Anicon § Parmetol § Candasetpic § Chlorocresol § Preventol CMK § Parachlorometra Cresol § 4-Chloro-3-methylphenol § 2-Chloro-Hydroxytoluene § Phenol, 4-Chloro-3-methyl- § Chlorophenol, 4-, methyl, 3- § RCRA Waste Number U039**	**59-50-7** **GO 7100000** **CFE250**	**Harmful**	**---**	**---**	**---**	**3,000** **PP**	**3,000** **PP**	**N/A**	**20**
p-Xylene **§§ ---** **§ p-Xylol § Chromar § Scintillar § 1,4-Xylene § para-Xylene § p-Methyltoluene § p-Dimethylbenzene § 1,4-Dimethylbenzene § 1,4-Dimethyl Benzene**	**106-42-3** **ZE 2625000** **XHS000**	**Toxic**	**---**	**---**	**1.17**	**10,000** **MCL**	**10,000** **MCL**	**0.5**	**1.5**
Paraquat Dichloride **§§ ---**	**1910-42-5**	**Toxic**	**---**	**---**	**---**	**30** **HA**	**30** **HA**	**0.8**	**---**
Parathion **§§ ---** **§ DNTP § Niran § Phoskil § Paradust § Stathion § Strathion § Pestox Plus § Nitrostigmine § Parathion Ethyl § Parathion-ethyl § Ethyl Parathion § Diethylparathion § Diethyl 4-Nitrophenylphosphorothioate § Diethyl para-Nitrophenol Thiophosphate § Diethyl-p-Nitrophenyl Monothiophosphate § O,O-Diethyl O-4-Nitrophenyl Thiophosphate § Phosphorothioic Acid, O,O-Diethyl O-(4-Nitrophenyl) Ester § Caswell Number 637 § EPA Pesticide Chemical Code 057501 § RCRA Waste Number P089**	**56-38-2** **TF 4920000,dry-liquid** **PAC250,dry**	**Carcinogen**	**0.065** **NPP**	**0.013** **NPP**	**---**	**---**	**---**	**---**	**1**
Pentachlorobenzene **§§ Benzene, Pentachloro-** **§ QCB- § RCRA Waste Number U183**	**608-93-5** **DA 6640000** **PAV500**	**Toxic with BCF >300**	**---**	**---**	**2,125**	**1.4** **PP**	**1.4** **PP**	**N/A**	**0.1**

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Pentachlorophenol §§ Penta § PCP § Durotox § Weedone § Chem-Tol § Lauxtol A § NCI C54933 § NCI C55378 § NCI C56655 § Permite § Dowcide 7 § Permacide § Penta-Kil§ Permagard § Penchlorol § Chlorophen § Pentachlorphenol § Pentaclorofenolo § Thompson's Wood Fix § Phenol, Pentachloro- § 2,3,4,5,6-Pentachlorophenol § 1-Hydroxy- 2,3,4,5,6-Pentachlorobenzene	87-86-5 SM 6300000 PAX250	Carcinogen	5.3 @ pH of 6.5 (14) PP	4 @ pH of 6.5 (14) PP	11	1 MCL	1 MCL	N/A	0.05
pH §§ ---	N/A	Harmful	(13)	(13)	---	(18)	(18)	N/A	---
Phenanthrene (PAH) §§ --- § Phenantrin	85-01-8 SF 7175000 PCW250	Toxic	---	---	30	---	---	0.01	0.25
Phenol §§ --- § Baker's P and S Liquid and Ointment § NCI C50124 § Benzenol § Monophenol § Oxybenzene § Phenic Acid § Carbolic Acid § Phenylic Acid § Hydroxybenzene § Hydroxybenzene § Phenyl Alcohol § Phenyl Hydrate § Phenylic Alcohol § Phenyl Hydroxide § Benzene, Hydroxy- § Monohydroxybenzene § RCRA Waste Number U188	108-95-2 SJ 3325000 PDN750	Harmful	---	---	1.4	300 PP	300 PP	100	10
Phosphorus, inorganic (20) §§ --- § Ortho-phosphorus § phosphorus, Ortho- § reactive phosphorus	14265-44-2 ---	Nutrient	(8)	(8)	---	---	---	1	1
Picloram §§ Tordon § ATCP § K-Pin § Borolin § Amdon Grazon § NCI C00237 § Tordon 10K § Tordon 22K § Tordon 101 Mixture § 3,5,6-Trichloro-4-Aminopicolinic Acid § 4-Amino-3,5,6-Trichloropicolinic Acid	1918-02-1 TJ 7525000 AMU250	Toxic	---	---	---	500 MCL	500 MCL	0.14	1
Pinoxaden (NOA 407855) (includes metabolites Pinoxaden NOA 407854 and pinoxaden NOA 447204) (35) §§ ---	N/A	Toxic	---	---	---	2,000 HA	2,000 HA	---	---

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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number, SAX Number (25) (26) (27)	Category (1) (2)	Aquatic Life Standards		Bio-concentration Factor (BCF) (5)	Human Health Standards (17) (16)		Trigger Value (22)	Required Reporting Value (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Polychlorinated Biphenyls, (sum of all homolog, all isomer, all congener or all Aroclor analyses) §§ PCB's § Aroclor 1016, 1221, 1232, 1242, 1248, 1254, 1260, 1268, 2565, 4465 § Chlophen § Chlorextol § Chlorinated Biphenyl § Chlorinated Diphenyl § Chlorinated Diphenylene § Chloro Biphenyl § Chloro-1,1-Biphenyl § Clophen § Dykanol § Fenclor § Inerteen § Kanechlor 300, 400, 500 § Montar § Noflamol § PCB (DOT) § Phenochlor § Polychlorobiphenyl § Pyralene § Pyranol § Santotherm § Sovol § Therminol FR-1	Multiple	Carcinogen	---	0.014 PP	31,200	0.00064 PP	0.5 MCL	N/A	1
Primisulfuron Methyl §§ Beacon § Exceed	86209-51-0	Toxic	---	---	---	42 I	42 I	0.1	---
Prometon §§ Pramitol § ---	1610-18-0	Toxic	---	---	---	100 HA	100 HA	0.3	---
Pronamide §§ Kerb § ---	23950-58-5	Carcinogen	---	---	---	50 HA	50 HA	N/A	---
Propachlor §§ Ramrod § ---	1918-16-7	Toxic	---	---	---	90 HA	90 HA	0.5	---
Propane, 1,2-Dibromo-3-Chloro- §§ Dibromochloropropane § 1,2-Dibromo-3-Chloropopane § Fumagon § Fumazone § NCI C00500 § Nemabrom § Nemafume § Nemagon § Nemagone § Nemagone Soil Fumigant § Nemanax § Nemapaz § Nemaset § Nematocide § Nematox § OS 1897 § OXY DBCP § SD 1897 § Caswell Number 287 § 1-Chloro-2,3-Dibromopropane § DBCP § EPA Pesticide Chemical Code 011301 § RCRA Waste Number U066	96-12-8 TX 8750000 DDL800	Carcinogen	---	---	---	0.2 MCL	0.2 MCL	N/A	0.05
Propazine §§ ---	139-40-2	Carcinogen	---	---	---	10 HA	10 HA	N/A	---
Propham §§ ---	122-42-9	Toxic	---	---	---	100 HA	100 HA	0.13	---
Propioconazole §§ 1-((2-(2,4-dichlorophenyl)-4propyl-1,3-dioxolan-2-yl)methyl)-1H-1,2,4-triazole § Banner § CGA-64250 § Caswell#323EE § Desmel § HSDB 6731 § Orbit § Radar § Tilt § EPA Pesticide # 122101	60207-90-1	Carcinogen				700 HA	700 HA		
Propoxur §§ Baygon § ---	114-26-1	Carcinogen	---	---	---	3 HA	3 HA	N/A	---

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Prosulfuron §§ Benezenesulfonamide, N(((4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino)carbonyl)-2-(3,3,3-trifluoropropyl)-	94125-34-5	Toxic				100 HA	100 HA		
Pyrasulfotole §§ pyrasulfotole §	365400-11-9	Toxic				70 HA	70 HA		
Pyrene (PAH) §§ --- § ß-Pyrine § beta-Pyrene § Benzo(def)Phenanthrene § Benzo[def]Phenanthrene	129-00-0 UR 2450000 PON250	Toxic	---	---	30	830 PP	830 PP	0.25	0.25
Radium 226 §§ --- --- ---	13982-63-6	Carcinogen / Radioactive	---	---	---	5 picocuries/liter Note: The sum of Radium 226 and 228. MCL	5 picocuries/liter Note: The sum of Radium 226 and 228. MCL	N/A	---
Radium 228 §§ --- --- ---	15262-20-1	Carcinogen / Radioactive	---	---	---	5 picocuries/liter Note: The sum of Radium 226 and 228. MCL	5 picocuries/liter Note: The sum of Radium 226 and 228. MCL	N/A	---
Radon 222 §§ --- --- ---	14859-67-7	Carcinogen / Radioactive	---	---	---	300 picocuries/liter HA	300 picocuries/liter HA	N/A	---
Selenium §§ Se § C.I. 77805 § Colloidal Selenium § Elemental Selenium § Selenium Alloy § Selenium Base § Selenium Dust § Selenium Elemental § Selinium Homopolymer§ Selenium Metal Powder, Non-Pyrophoric § Vandex	7782-49-2 VS 7700000 and VS 8310000, colloidal SBO500 and SBP000,colloidal	Toxic	20	5 HA	4.8	50 MCL	50 MCL	0.6	1

CIRCULAR DEQ-7, MONTANA NUMERIC WATER QUALITY STANDARDS(9)									
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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number, SAX Number (25) (26) (27)	Category (1) (2)	Aquatic Life Standards		Bio-concentration Factor (BCF) (5)	Human Health Standards (17) (16)		Trigger Value (22)	Required Reporting Value (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Silver §§ Ag § Argentum § C.I. 77820 § Shell Silver § Silver Atom	7440-22-4 NIOSH: VW 3500000 SAX: SDI500	Toxic	0.374@ 25 mg/l hardness (12) PP	---	0.5	100 HA	100 HA	0.2	0.5
Simazine §§ --- § CDT § Herbex § Framed § Bitemol § Radokor § A 2079 § Batazina § Cat (Herbicide) § CET § G 27692 § Geigy 27,692 § Gesaran § Gesatop 50 § Simazine 80W § Symazine § Taphazine § W 6658 § Zeapur § Princep § Aquazine § Herbazin § Tafazine § 2,4-bis(Ethylamino)-6-Chloro-s-Triazine § 1-Chloro, 3,5-Bisethylamino-2,4,6-Triazine § 2-Chloro-4,6-Bis(Ethylamino)-1,3,5-Triazine § 6-Chloro-N,N'-Diethyl-1,3,5-Triazine-2,4-Diyldiamine	122-34-9 XY 5250000 BJP000	Carcinogen	---	---	---	4 MCL	4 MCL	N/A	0.3
Strontium §§ ---	7447-24-6 ---	Toxic	---	---	---	4,000 HA	4,000 HA	100	---
Styrene §§ --- § Styrol § Cinnamol § Cinnamene § Cinnamenol § NCI C02200 § Styrole § Strolene § Styron § Stropor § Vinylbenzol § Phenethylene § Phenylethene § Vinylbenzene § Ethenylbenzene § Phenylethylene § Benzene, Vinyl- § Stryene, Monomer	100-42-5 WL 3675000 SMQ000	Carcinogen	---	---	---	100 HA	100 HA	N/A	0.5
Sulfometuron Methyl §§ Oust § ---	74222-97-2	Toxic	---	---	---	2000 HA	2000 HA	0.01	---
Sulfosulfuron §§ imidazo(1,2-a)pyridine-3-sulfonamide,N-(((4,6-dimethoxy-2-pyrimidinyl)amino)cabonyl)-2-(ethylsulfonyl)- § Sulfosulfuron (ISO)	141776-32-1	Toxic				300 HA	300 HA		
Tebuconazole §§ 1H-1,2,4-Triazole-1-ethanol,alpha-(2-(4-chlorophenyl)ethyl)-apha-(1,1-dimethylethyl)- § BAY-HWG 1608 § Elite § Ethyltrianol § Etiltrianol § Fenetrazole § Folicur § LYNX § Preventol A 8 § Raxil § Terbucanazole § Terbutrazole § HWG 1608 § HSDB 7448	107534-96-3	Carcinogen				200 HA	200 HA		

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Tebuthiuron §§ --- TebuconazoleSpike	34014-18-1	Toxic	---	---	---	500 HA	500 HA	2	---
Temperature §§ ---	N/A	Harmful	(13)	(13)	---	---	---	N/A	---
Terbacil §§ Sinbar § ---	5902-51-1	Toxic	---	---	---	90 HA	90 HA	2.2	---
Terbufos §§ Counter § ---	13071-79-9	Toxic	---	---	---	0.9 HA	0.9 HA	0.5	---
Tetrachlorobenzene, 1,2,4,5- §§ Benzene, 1,2,4,5-Tetrachloro- § RCRA Waste Number U207 § 1,2,4,5-Tetrachlorobenzene	95-94-3 DB 9450000 TBN750	Toxic with BCF >300	---	---	1,125	0.97 NPP	0.97 NPP	N/A	0.1
Tetrachloroethane, 1,1,2,2- §§ Tetrachloroethane § TCE § Cellon § Westron § Bonoform § sym-Tetrachloroethane § Acetylene Tetrachloride § 1,1,2,2-Tetrachloroethane § Ethane, 1,1,2,2-Tetrachloro- § 1,1-Dichloro-2,2-Dichloroethane § RCRA Waste Number U209	79-34-5 NIOSH: KI 8575000 SAX: ACK500	Carcinogen	---	---	5	1.7 PP	2.0 HA	N/A	0.5
Tetrachloroethylene §§ Perchlorethylene § NCI C04580 § PCE § Perk § PERC § ENMA § Dow-Per § Perchlor § Perclene § Perklone § Didakene § Tetra Cap § Percosolve § Perchloroethylene § Tetrachloroethene § Carbon Bichloride § Carbon Dichloride § Ethylene Tetrachloride § Ethylene, Tetrachloro- § 1,1,2,2-Tetrachloroethylene § RCRA Waste Number U210	127-18-4 KX 3850000 TBQ250	Carcinogen	---	---	30.6	5 MCL	5 MCL	N/A	0.5
Thallium §§ Tl § Ramor	7440-28-0 XG 3425000 TEI000	Toxic	---	---	119	0.24 PP	2 MCL	0.3	0.2
Thifensulfuron Methyl §§ --- § Pinnacle	79277-27-3	Toxic	---	---	---	910 I	910 I	1	---

CIRCULAR DEQ-7, MONTANA NUMERIC WATER QUALITY STANDARDS(9)									
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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	**CASRN numbers, NIOSH number, SAX Number (25) (26) (27)**	**Category (1) (2)**	**Aquatic Life Standards**		**Bio-concentration Factor (BCF) (5)**	**Human Health Standards (17) (16)**		**Trigger Value (22)**	**Required Reporting Value (19)**
			Acute (3)	**Chronic (4)**		**Surface Water**	**Ground Water**		
Toluene **§§ ---** **§ Antisal 1a § NCI C07272 § Toluol § Tolu-Sol § Methacide § Methylbenzol § Methylbenzene § Phenylmethane § Phenyl-Methane § Methyl-Benzene § Benzene, Methyl § RCRA Waste Number U220**	**108-88-3** **XS 5250000** **TGK750**	**Toxic**	**---**	**---**	**10.7**	**1,000** **MCL**	**1,000** **MCL**	**0.01**	**0.5**
Toxaphene **§§ ---** **§ Attac 4-2 § Alltox § Alltex § Attac 6 § Toxakil § Agricide § Chem-Phene § Clor Chem T-590 § Compound 3956 § Crestoxo § Estonox § Geniphene § Gy-Phene § Hercules 3956 § Melipax § Motox § PCC § Phenacide § Toxaphene mixture § Chlorinated-Camphene § Camphene, Octachloro- § RCRA Waste Number P123**	**8001-35-2** **XW 5250000** **THH750**	**Carcinogen**	**0.73** **PP**	**0.0002** **PP**	**13,100**	**0.0028** **PP**	**0.3** **HA**	**N/A**	**1**
Tralkoxydim (28) **§§ Achieve**	**87820-88-0**	**Carcinogen**	**---**	**---**	**---**	**20** **HA**	**20** **HA**	**N/A**	**---**
trans-1,2-Dichloroethylene **§§ ---** **§ trans-Dichloroethylene § RCRA Waste Number U079 § trans-1,2-Dichloroethane § trans-1,2-Dichloroethene § Dichloroethylene, trans-§ trans-Acetylene Dichloride § 1,2-trans-Dichloroethylene § Ethene, 1,2-Dichloro-, (E)- § 1,2-Dichloroethylene, trans-**	**156-60-5** **KV 9400000** **DFI600**	**Toxic**	**---**	**---**	**1.58**	**100** **MCL**	**100** **MCL**	**0.05**	**0.5**
trans-1,3-Dichloropropene **§§ Telone II** **§ 1,3-Dichloropropene § 1,3-Dichloropropylene § (E)-1,3-Dichloropropene § trans-1,3-Dichloropropylene § 1-Propene, 1,3-Dichloro-, (E)-**	**10061-02-6** **UC 8320000** **DGH000**	**Carcinogen**	**---**	**---**	**1.91**	**2** **HA**	**2** **HA**	**N/A**	**0.5**
trans-Nonachlor (Chlordane component) **§§ ---** **§ Chlordane, trans-Isomer**	**39765-80-5** **---**	**Carcinogen**	**---**	**---**	**14,100**	**0.0080** **PP**	**1** **HA**	**N/A**	**0.4**
Triallate **§§ ---** **§ Avadex BW § BRN 1875853 § Dipthal § Far-Go § Triamyl**	**2303-17-5**	**Carcinogen**	**---**	**---**	**---**	**5** **HA**	**5** **HA**	**---**	**---**
Triasulfuron **§§ Amber**	**82097-50-5**	**Toxic**	**---**	**---**	**---**	**70** **I**	**70** **I**	**1**	**---**

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Pollutant **Element / Chemical Compound or Condition** **§§ - Primary Synonym § - Other Names**	CASRN numbers, NIOSH number, SAX Number (25) (26) (27)	Category (1) (2)	Aquatic Life Standards		Bio-concentration Factor (BCF) (5)	Human Health Standards (17) (16)		Trigger Value (22)	Required Reporting Value (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Tribenuron Methyl **§§ Express**	**101200-48-0**	**Carcinogen**	**---**	**---**	**---**	**8** **I**	**8** **I**	**0.1**	**---**
Tributyltin (TBT) **§§ §Tin-San § Tributylin chloride complex § EPA Pesticide Chemical #083108**	**56573-85-4**	**Toxic**	**0.46** **NPP**	**0.072** **NPP**	**---**	**---**	**---**	**N/A**	**---**
Triclopyr **§§ 3,4,5-Trichloro-2pyridinyloxyacetic acid** **§ Confront § Dowco 233 § Garlon § Garlon 2 § Garlon 250 § Grazon 250 § Redeem § Release § Turflon § Caswell# 8821 § HSDB 7060 § EPA Pesticide Chemical #116001**	**55335-06-3**	**Toxic**				**350** **I**	**350** **I**		
Trichlorobenzene, 1,2,4- **§§ Benzene, 1,2,4-Trichloro-** **§ unsym-Trichlorobenzene § 1,2,4-Trichlorobenzene**	**120-82-1** **DC 2100000** **TIK250**	**Toxic**	**---**	**---**	**114**	**35** **PP**	**70** **MCL**	**0.02**	**0.5**
Trichloroethane, 1,1,2- **§§ Vinyl Trichloride** **§ 1,1,2-Trichloroethane § ß-T § Ethane Trichloride § beta-Trichloroethane § NCI C04579 § Ethane, 1,1,2-Trichloro- § Caswell Number 875A [NLM] § EPA Pesticide Chemical Code 081203 [NLM]§ 1,2,2-Trichloroethane § RCRA Waste Number U227**	**79-00-5** **KJ 3150000** **TIN000**	**Carcinogen**	**---**	**---**	**4.5**	**3** **HA**	**3** **HA**	**N/A**	**0.5**
Trichloroethane, 1,1,1- **§§ Methyl Chloroform** **§ -T § Strobane § Inhibisol § 1,1,1-TCE § Tri-Ethane § Solvent 111 § Aerothene TT § Chloroethene § Chlorten § NCI C04626 § Methylchloroform § Chloroform, Methyl- § 1,1,1-Trichloroethene § alpha-Trichloroethane § Methyltrichloromethane § 1,1,1-Trichloroethane § Ethane, 1,1,1-Trichloro- § RCRA WAste Number U226**	**71-55-6** **KJ 2975000** **TIM750**	**Toxic**	**---**	**---**	**5.6**	**200** **MCL**	**200** **MCL**	**0.5**	**0.5**

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Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number, SAX Number (25) (26) (27)	Category (1) (2)	Aquatic Life Standards		Bio-concentration Factor (BCF) (5)	Human Health Standards (17) (16)		Trigger Value (22)	Required Reporting Value (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Trichloroethylene **§§ ---** **§ TCE § Triad § Vitran § Algylen § Dow-Tri § Lanadin § Vestrol § Anamenth § Benzinol § Tri-Plus § Tri-Clene § Trichlorethene § Trichloroethene § Trichloroethane § Trichlorethylene § Tetrachloroethene § Ethene, Trichloro- § Ethylene Trichloride § Ethylene, Trichloro-** **§ Acetylene Trichloride § 1,1,2-Trichloroethylene § 1,2,2-Trichloroethylene § 1-Chloro-2,2-Dichloroethylene § 1, 1-Dichloro-2-Chloroethylene**	**79-01-6** **KX 4550000** **TIO750**	**Carcinogen**	**---**	**---**	**10.6**	**5** **MCL**	**5** **MCL**	**N/A**	**0.5**
Trichlorofluoromethane (HM) **§§ Freon 11** **§ F 11 § FC 11 § Arcton 9 § Eskimon 11 § Halocarbon 11 § Algofrene Type 1 § Fluorocarbon Number 11 § NCI C04637 § Isotron 11 § Fluorotrichloromethane § Isceon 131 § Monofluorotrichloromethane § Ucon Refrigerant 11 § Trichloromonofluoromethane § RCRA Waste Number U121**	**75-69-4** **PB 6125000** **TIP500**	**Toxic**	**---**	**---**	**3.75**	**10,000** **PP**	**10,000** **PP**	**0.07**	**0.5**
Trichlorophenol, 2,4,5- **§§ Dowcide B** **§ 2,4,5-Trichlorophenol § Nurelle § Dowcide 2 § Collunosol § Preventol 1 § NCI C61187 § RCRA Waste Number U230**	**95-95-4** **SN 1400000** **TIV750**	**Harmful**	**---**	**---**	**110**	**~~7~~** **1,800** **NPP**	**~~7~~** **1,800** **NPP**	**10**	**10**
Trichlorophenol, 2,4,6- **§§ Phenachlor** **§ Omal § Phenol, 2,4,6-trichloro- § NCI C02904 § 2,4,6-Trichlorophenol § Dowcide 2S § RCRA Waste Number U231**	**88-06-2** **SN 1575000** **TIW000**	**Carcinogen**	**---**	**---**	**150**	**14** **PP**	**30** **HA**	**N/A**	**10**

CIRCULAR DEQ-7, MONTANA NUMERIC WATER QUALITY STANDARDS(9)

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Trichlorophenoxy Proprionic Acid, 2 (2,4,5-) §§ Fenoprop § 2 (2,4,5-Trichlorophenoxy) Proprionic Acid § Kuran § Propon § Silvex § Aqua-Vex § Ded-Weed § Sta-Fast § 2,4,5-TP § Color-Set § Weed-B-Gon § Double Strength § RCRA Waste Number U233 § 2,4,5-Trichlorophenoxypropionic Acid § (2,4,5-Trichlorophenoxy)Propionic Acid § 2-(2,4,5-Trichlorophenoxy)-Proprionic Acid § (+/-)-2-(2,4,5-Trichlorophenoxy)propanoic Acid	93-72-1 UF 8225000 TIX500	Toxic	---	---	---	10 NPP	50 MCL	0.075	0.1
Trichlorophenoxyacetic Acid §§ Brush-Rhap § 2,4,5-T (Brush-Rhap)	93-76-5	Toxic	---	---	---	70 HA	70 HA	N/A	---
Trifluralin §§ Treflan § Buckle	1582-09-8	Carcinogen	---	---	---	5 HA	5 HA	N/A	---
Trihalomethanes, total §§ --- § TTHMs	Multiple	Carcinogen	---	---	---	100 MCL	100 MCL	N/A	2
Triticonazole §§ ---	131983-72-7	Toxic	---	---	---	1,000 HA	1,000 HA	---	---
Turbidity (20) §§ ---	N/A	Harmful	(13)	(13)	---	---	---	N/A	1 NTU
Uranium, natural §§ U § Uranium Metal, Pyrophoric	7440-61-1 YR 3490000 UNS000	Carcinogen / Radioactive	---	---	---	30 MCL	30 MCL	0.03	---
Vinyl 2-Chloroethyl Ether §§ Vinyl ß-Chloroethyl Ether- § 2-Chloroethyl Vinyl Ether § (2-Chloroethoxy)Ethene § RCRA Waste Number U042	110-75-8 KN 6300000 CHI250	Carcinogen	---	---	0.557	---	---	N/A	---
Vinyl Chloride §§ --- § VC § VCM § Chlorethene § Chloroethene § Chlorethylene § Chloroethylene § Ethylene, Chloro- § Monochloroethylene § Ethylene Monochloride § Vinyl Chloride Monomer § Vinyl C Monomer § Trovidur § RCRA Waste Number U043	75-01-4 KU 9625000 VNP000	Carcinogen	---	---	1.17	0.25 PP	0.2 HA	N/A	0.5

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Pollutant **Element / Chemical Compound or Condition** **§§ - Primary Synonym § - Other Names**	CASRN numbers, NIOSH number, SAX Number (25) (26) (27)	Category (1) (2)	Aquatic Life Standards		Bio-concentration Factor (BCF) (5)	Human Health Standards (17) (16)		Trigger Value (22)	Required Reporting Value (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Xylenes **§§ ---** **§ Xylol § Violet 3 § Mixed Xylenes § Methyl Toluene § Dimethylbenzene § NCI C55232 § Total equals the sum of meta, ortho, and para. § RCRA Waste Number U239**	**1330-20-7** **ZE 2100000** **XGS000**	**Toxic**	**---**	**---**	**1.17**	**10,000** **MCL**	**10,000** **MCL**	**0.5**	**1.5**
Zinc **§§ Zn** **§ Blue Powder § C.I. 77945 § C.I. Pigment Black 16 § C.I. Pigment Metal 6 § Emanay Zinc Dust § Granular Zinc § Jasad § Merrillite § Pasco § Zinc, Powder or Dust, non-Pyrophoric § Zinc, Powder or Dust, Pyrophoric**	**7440-66-6** **ZG 8600000** **ZBJ000**	**Toxic**	**37 @ 25mg/l hardness (12)** **PP**	**37 @ 25 mg/l hard ness (12)** **PP**	**47**	**2,000** **HA**	**2,000** **HA**	**5**	**10**

(1) Based on EPA's categories and include parameters determined to be toxic (toxin), carcinogenic (carcinogen), or harmful. Harmful parameters include nutrients, biological agents, and those parameters which cause taste and/or odor effects or physical effects.

(2) Chemicals classified by EPA as carcinogens for an oral route of exposure in the drinking water regulations and health advisories (EPA 822-B-96-002) and those listed as carcinogens in the EPA priority pollutants list. Carcinogens include those parameters in classifications A (Human Carcinogens), B1 or B2 (Probable Human Carcinogens), and C (Possible Human Carcinogen).

(3) The one-hour average concentration of these parameters in surface waters may not exceed these values more than once in any three year period, on average, with the exception of silver, which, at present, is interpreted as a “not to exceed” value.

(4) The 96 hour average concentration of these parameters in surface waters may not exceed these values more than once in any three year period, on average.

(5) All bioconcentration factors (BCF's) were developed by the EPA as part of the Standards development as mandated by Section 304(a) of the federal Clean Water Act. National Recommended Water Quality Criteria: 2002 Human Health Criteria Calculation Matrix (EPA-822-R-02-012).

(6) The 24 hour geometric mean value must not exceed these values.

(7) Freshwater Aquatic Life Standards for total ammonia nitrogen (mg/l NH3-N plus NH4-N).

Because these formulas are non-linear in pH and temperature, the Standard is the average of separate evaluations of the formulas reflective of the fluctuations of flow, pH, and temperature within the averaging period; it is not appropriate to apply the formula to average pH, temperature and flow.

1. The one-hour average concentration of total ammonia nitrogen (in mg N/L) does not exceed the CMC (acute criterion) calculated using the following equations.

Where salmonid fish are present:

$$CMC = \frac{0.275}{1 + 10^{7.204 - pH}} + \frac{39.0}{1 + 10^{pH - 7.204}}$$

Or where salmonid fish are not present:

$$CMC = \frac{0.411}{1 + 10^{7.204 - pH}} + \frac{58.4}{1 + 10^{pH - 7.204}}$$

2. The thirty-day average concentration of total ammonia nitrogen (in mg N/L) does not exceed the CCC (chronic criterion) calculated using the following equations.

When fish early life stages[1] are present:

$$CCC = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) \times MIN\left(2.85, 1.45 \times 10^{0.028 \times (25 - T)}\right)$$

When fish early life stages[1] are absent:

$$CCC = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) \times \frac{1.45 \times 10^{0.028 \times 25}}{10^{0.028 \times MAX(T,7)}}$$

[1] Includes all embryonic and larval stages and all juvenile forms of fish to 30-days following hatching.

3. In addition, the highest four-day average within the 30-day period should not exceed 2.5 times the CCC.

Table 1. pH-Dependent Values of the CMC (Acute Criterion) Ammonia Standard.

CMC, total ammonia nitrogen (mg/l NH_3-N plus NH_4-N)		
pH	**Salmonids Present**	**Salmonids Absent**
6.5	**32.6**	**48.8**
6.6	**31.3**	**46.8**
6.7	**29.8**	**44.6**
6.8	**28.1**	**42.0**
6.9	**26.2**	**39.1**
7.0	**24.1**	**36.1**
7.1	**22.0**	**32.8**
7.2	**19.7**	**29.5**
7.3	**17.5**	**26.2**
7.4	**15.4**	**23.0**
7.5	**13.3**	**19.9**
7.6	**11.4**	**17.0**
7.7	**9.65**	**14.4**
7.8	**8.11**	**12.1**
7.9	**6.77**	**10.1**
8.0	**5.62**	**8.40**
8.1	**4.64**	**6.95**
8.2	**3.83**	**5.72**
8.3	**3.15**	**4.71**
8.4	**2.59**	**3.88**
8.5	**2.14**	**3.20**
8.6	**1.77**	**2.65**
8.7	**1.47**	**2.20**
8.8	**1.23**	**1.84**
8.9	**1.04**	**1.56**
9.0	**0.885**	**1.32**

Table 2. Temperature and pH-Dependent Values of the CCC (Chronic Criterion) for Fish Early Life Stages Present and for Fish Early Life Stages Absent.

	CCC for Fish Early Life Stages Present, total ammonia nitrogen (mg/l NH_3-N plus NH_4-N)									
pH	Temperature, C									
	0	14	16	18	20	22	24	26	28	30
6.5	6.67	6.67	6.06	5.33	4.68	4.12	3.62	3.18	2.80	2.46
6.6	6.57	6.57	5.97	5.25	4.61	4.05	3.56	3.13	2.75	2.42
6.7	6.44	6.44	5.86	5.15	4.52	3.98	3.50	3.07	2.70	3.37
6.8	6.29	6.29	5.72	5.03	4.42	3.89	3.42	3.00	2.64	2.32
6.9	6.12	6.12	5.56	4.89	4.30	3.78	3.32	2.92	2.57	2.25
7.0	5.91	5.91	5.37	4.72	4.15	3.65	3.21	2.82	2.48	2.18
7.1	5.67	5.67	5.15	4.53	3.98	3.50	3.08	2.70	2.38	2.09
7.2	5.39	5.39	4.90	4.31	3.78	3.33	2.92	2.57	2.26	1.99
7.3	5.08	5.08	4.61	4.06	3.57	3.13	2.76	2.42	2.13	1.87
7.4	4.73	4.73	4.30	3.78	3.32	2.92	2.57	2.26	1.98	1.74
7.5	4.36	4.36	3.97	3.49	3.06	2.69	2.37	2.08	1.83	1.61
7.6	3.98	3.98	3.61	3.18	2.79	2.45	2.16	1.90	1.67	1.47
7.7	3.58	3.58	3.25	2.86	2.51	2.21	1.94	1.71	1.50	1.32
7.8	3.18	3.18	2.89	2.54	2.23	1.96	1.73	1.53	1.33	1.17
7.9	2.80	2.80	2.54	2.24	1.96	1.73	1.52	1.33	1.17	1.03
8.0	2.43	2.43	2.21	1.94	1.71	1.50	1.32	1.16	1.02	0.897
8.1	2.10	2.10	1.91	1.68	1.47	1.29	1.14	1.00	0.879	0.773
8.2	1.79	1.79	1.63	1.43	1.26	1.11	0.973	0.855	0.752	0.661
8.3	1.52	1.52	1.39	1.22	1.07	0.941	0.827	0.727	0.639	0.562
8.4	1.29	1.29	1.17	1.03	0.906	0.796	0.700	0.615	0.541	0.475
8.5	1.09	1.09	0.990	0.870	0.765	0.672	0.591	0.520	0.457	0.401
8.6	0.920	0.920	0.836	0.735	0.646	0.568	0.499	0.439	0.386	0.339
8.7	0.778	0.778	0.707	0.622	0.547	0.480	0.422	0.371	0.326	0.287
8.8	0.661	0.661	0.601	0.528	0.464	0.408	0.359	0.315	0.277	0.244
8.9	0.565	0.565	0.513	0.451	0.397	0.349	0.306	0.269	0.237	0.208
9.0	0.486	0.486	0.442	0.389	0.342	0.300	0.264	0.232	0.204	0.179

*At 15 C and above, the criterion for fish ELS absent is the same as the criterion for fish ELS present

CCC for Fish Early Life Stages Absent, total ammonia nitrogen (mg/l NH_3-N plus NH_4-N)									
Temperature, C									
0-7	8	9	10	11	12	13	14	15*	16*
10.8	10.1	9.51	8.92	8.36	7.8	7.35	6.89	6.46	6.06
10.7	9.99	9.37	8.79	8.24	7.72	7.24	6.79	6.36	5.97
10.5	9.81	9.20	8.62	8.08	7.58	7.11	6.66	6.25	5.86
10.2	9.58	8.98	8.42	7.90	7.40	6.94	6.51	6.10	5.72
9.93	9.31	8.73	8.19	7.68	7.20	6.75	6.33	5.93	5.56
9.60	9.00	8.43	7.91	7.41	6.95	6.52	6.11	5.73	5.37
9.20	8.63	8.09	7.58	7.11	6.67	6.25	5.86	5.49	5.15
8.75	8.20	7.69	7.21	6.76	6.34	5.94	5.57	5.22	4.90
8.24	7.73	7.25	6.79	6.37	5.97	5.60	5.25	4.92	4.61
7.69	7.21	6.76	6.33	5.94	5.57	5.22	4.89	4.59	4.30
7.09	6.64	6.23	5.84	5.48	5.13	4.81	4.51	4.23	3.97
6.46	6.05	5.67	5.32	4.99	4.68	4.38	4.11	3.85	3.61
5.81	5.45	5.11	4.79	4.49	4.21	3.95	3.70	3.47	3.25
5.17	4.84	4.54	4.26	3.99	3.74	3.51	3.29	3.09	2.89
4.54	4.26	3.99	3.74	3.51	3.29	3.09	2.89	2.71	2.54
3.95	3.70	3.47	3.26	3.05	2.86	2.68	2.52	2.36	2.21
3.41	3.19	2.99	2.81	2.63	2.47	2.31	2.17	2.03	1.91
2.91	2.73	2.56	2.40	2.25	2.11	1.98	1.85	1.74	1.63
2.47	2.32	2.18	2.04	1.91	1.79	1.68	1.58	1.48	1.39
2.09	1.96	1.84	1.73	1.62	1.52	1.42	1.33	1.25	1.17
1.77	1.66	1.55	1.46	1.37	1.28	1.20	1.13	1.06	0.990
1.49	1.40	1.31	1.23	1.15	1.08	1.01	0.951	0.892	0.836
1.26	1.18	1.11	1.04	0.976	0.915	0.858	0.805	0.754	0.707
1.07	1.01	0.944	0.885	0.829	0.778	0.729	0.684	0.641	0.601
0.917	0.860	0.806	0.756	0.709	0.664	0.623	0.584	0.548	0.513
0.790	0.740	0.694	0.651	0.610	0.572	0.536	0.503	0.471	0.442

(8) A plant nutrient, excessive amounts of which may cause violations of Administrative Rules of Montana (ARM) 17.30.637 (1)(e).

(9) Approved methods of sample preservation, collection, and analysis for determining compliance with the standards set forth in DEQ-7 are found in the surface water quality standards (ARM17.30.601, et seq.) and the ground water rules (ARM 17.30.1001, et seq.).

Standards for metals (except aluminum) in surface water are based upon the analysis of samples following a "total recoverable" digestion procedure (EPA Method 200.2, Supplement I, Rev. 2.8, May, 1994

Standards for alpha emitters, beta emitters and gamma emitters in surface waters are based upon the analysis of unfiltered samples and appropriate EPA approved analysis methods.

Standards for metals in ground water are based upon the dissolved portion of the sample (after filtration through a 0.45 µm membrane filter, as specified in "Methods for Analysis of Water and Wastes" 1983, Environmental Monitoring and Support Laboratory, U.S. Environmental Protection Agency, EPA-600/4-79-020, or equivalent). Standards for alpha emitters, beta emitters and gamma emitters in ground water are based upon the analysis of filtered samples and appropriate EPA approved analysis methods.

Standard for organic parameters in surface water and ground water are based on unfiltered samples.

(10) Calculation of an equivalent concentration of 2,3,7,8-TCDD is to be based on congeners of CDDs/CDFs and the toxicity equivalency factors (TEF) in van den Berg, M: et al. (2006) The 2005 World Health Organization Re-evaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds. Toxicological Sciences 93(2):223-241. The analysis method to be used is EPA Method 1613, Revision B, Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS), EPA Method 8290, or other method approved by the department on case by case basis. The Required Reporting Value(s) (RRV) for Dioxin and congeners are to be the lowest detection level for the analysis method approved by the Department.

(11) Radionuclides consisting of alpha emitters, beta emitters and gamma emitters are classified as carcinogens. Alpha emitters means the total radioactivity due to alpha particle emission. Beta emitters means the total radioactivity due to beta particle emission. Gamma emitters means the total radioactivity due to gamma particle emission. The emitters covered under this Standard include but are not limited to: Cesium, radioactive Iodine, radioactive Strontium-89 and -90, radioactive, Tritium Gamma photon emitters

(12) Freshwater Aquatic Life Standards for these metals are expressed as a function of total hardness (mg/l, CaCO3). The values displayed in the chart correspond to a total hardness of 25 mg/l. The hardness relationships are:

	Acute = exp.{ma[ln(hardness)]+ba}		**Chronic = exp.{mc[ln(hardness)]+bc}**	
	ma	**ba**	**mc**	**Bc**
cadmium	**1.0166**	**-3.924**	**0.7409**	**-4.719**
Copper	**0.9422**	**-1.700**	**0.8545**	**-1.702**
chromium (III)	**0.819**	**3.7256**	**0.819**	**0.6848**
Lead	**1.273**	**-1.46**	**1.273**	**-4.705**
Nickel	**0.846**	**2.255**	**0.846**	**0.0584**
Silver	**1.72**	**-6.52**	**--------**	**---------**
Zinc	**0.8473**	**0.884**	**0.8473**	**0.884**

Note: If the hardness is <25mg/L as CaCO3, the number 25 must be used in the calculation. If the hardness is greater than or equal to 400 mg/L as CaCO3, 400 mg/L must be used in the calculation.

(13) This standard is based upon Water-Use Classifications. See Administrative Rules of Montana (ARM), title 17, Chapter 30 - Water Quality, Sub-Chapter 6 - Surface Water Quality Standards.

(14) Freshwater Aquatic Life Standard for pentachlorophenol is dependent on pH. Values displayed in the chart correspond to a pH of 6.5 and are calculated as follows:

Acute = exp[1.005(pH) - 4.869] Chronic = exp[1.005(pH) - 5.134]

(15) Freshwater Aquatic Life Standard for dissolved oxygen in milligrams per liter are as follows:

	Standards for Waters Classified A-1, B-1, B-2, C-1, and C-2		Standards for Waters Classified B-3, C-3, and I	
	Early Life Stages[1,2]	**Other Life Stages**	**Early Life Stages[2]**	**Other Life Stages**
30 Day Mean	**N/A[3]**	**6.5**	**N/A[3]**	**5.5**
7 Day Mean	**9.5 (6.5)**	**N/A**	**6.0**	**N/A**
7 Day Mean Minimum	**N/A[3]**	**5.0**	**N/A[3]**	**4.0**
1 Day Minimum[4]	**8.0 (5.0)**	**4.0**	**5.0**	**3.0**

1 These are water column concentrations recommended to achieve the required inter-gravel dissolved oxygen concentrations shown in parentheses. For species that have early life stages exposed directly to the water column, the figures in parentheses apply.
2 Includes all embryonic and larval stages and all juvenile forms of fish to 30-days following hatching.
3 N/A (Not Applicable).
4 All minima should be considered as instantaneous concentrations to be achieved at all times.

(16) Surface or groundwater concentrations may not exceed these values.

(17) Source of the criteria used to derive the standard:

PP = priority pollutant criteria
NPP = non-priority pollutant criteria
OL= organoleptic pollutant criteria
MCL = Maximum contaminate level from the drinking water regulations
SMCL =secondary maximum contaminate level
HA = health advisory all from EPA's "Drinking Water Standards and Health Advisories" (October 1996)
I = standard derived from data obtained from federal data sources available on the Internet as of June 1998

(18) The Narrative Standards are located in the Administrative Rules of Montana (ARM) 17.30.601 et seq. and ARM 17.30.1001 et seq.

(19) The Required Reporting Value (RRV) is the detection level that must be achieved in reporting surface water or ground water monitoring or compliance data to the Department unless otherwise specified in a permit, approval or authorization issued by the department. The RRV is the Department's best determination of a level of analysis that can be achieved by the majority of commercial, university, or governmental laboratories using EPA approved methods or methods approved by the department.

(20) Applicable to surface waters only.

(21) Based on taste and odor thresholds given in EPA 822-f-97-008 December 1997.

(22) Trigger Values are used to determine if a given increase in the concentration of toxic parameters is significant or non-significant as per the non-degradation rules ARM 17.30.701 et seq. The acronym "N/A" means "not applicable".

(23) The concentration of iron must not reach values that interfere with the uses specified in the surface and ground water standards (17.30.601 et seq. and 17.30.1001 et seq.) The Secondary Maximum Contaminant Level of 300 micrograms per liter which is based on aesthetic properties such as taste, odor, and staining may be considered as guidance to determine the levels that will interfere with the specified uses.

(24) The concentration of manganese must not reach values that interfere with the uses specified in the surface and ground water standards (17.30.601 et seq. and 17.30.1001 et seq.). The Secondary Maximum Contaminant Level of 50 micrograms per liter which is based on aesthetic properties such as taste, odor, and staining may be considered as guidance to determine the levels that will interfere with the specified uses.

(25) CASRN is an acronym for the American Chemical Society's Chemical Abstracts Service Registry Number.

(26) The NIOSH RTECS number is a unique number used for identification in the National Institute for Occupational Safety and Health (NIOSH) Registry of Toxic Effects of Chemical Substances.

(27) SAX number in the format AAA123 is a unique number for identification of materials in the Dangerous Properties of Industrial Materials, authors N. Irving Sax and Richard J. Lewis, publisher Van Nostrand Reinhold.

(28) The sum of the concentrations of tralkoxydim and its breakdown products shall not exceed the standards listed. For a list of known breakdown products, see EPA memorandum "EFED's Section 3 Review for Tralkoxydim (Chemical #121000; Case # 060780; DP Barcodes 0234682, 0234752, 0238697, 0235723 & 0239519)," and the associated "Environmental Fate Assessment for Tralkoxydim."

(29) Ground water human health standard is based on the relative potency for selected PAH compounds listed in Table 8 of the EPA “Provisional Guidance for Quantitative Risk Assessment of Polycyclic Aromatic Hydrocarbons” July 1993, EPA/600/R-93/089.

(30) The sum of the concentrations of acetochlor and the breakdown products, acetochlor ESA and acetochlor OA, shall not exceed the standards listed.

(31) The sum of the concentrations of alachlor and the breakdown products, alochlor ESA and alochlor OA, shall not exceed the standards listed.

(32) The sum of the concentrations of atrazine and the breakdown products, deethyl atrazine, deisopropyl atrazine, and deethyl deisopropyl atrazine, shall not exceed the standards listed

(33) The sum of the concentrations of imazamethabenz-methyl ester and the breakdown product, imazamethabenz methyl acid, shall not exceed the standards listed.

(34) The sum of the concentrations of metolachlor and the breakdown products, metolachlor ESA and metolachlor OA, shall not exceed the standards listed.

(35) The sum of the concentrations of pinoxaden (NOA 407855) and the breakdown products, pinoxaden NOA 407854 and pinoxaden NOA 447204, shall not exceed the standards listed.

(36) The human health criteria for arsenic is the more restrictive of the risk based level of 1 in 1000 [1x10-3], or the MCL.